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AIR CONDITIONING & REFRIGERATION News

October 25, 1954 Subscription Price, $6 Per Year

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INSIDE DOPE

Learn to live and laugh—
Thus delay your epitaph

By GEORGE F. TAUBENECK

Stories of the Week
Philosophy of the Week
The Show Must Go On
Gags of the Week
Definition of a Secretary
Verse of the Week
What's Happening at Servel?
Our New Book
Post Scripta
Ever Hear of Di Maggio?
Add Lincoln Stories
Inside Latches for the Lockers, Please
Caboose Thoughts

Stories of the Week

Municipal bus driver filled out a standard questionnaire following an accident. On the dotted line prefaced: Disposition of Passengers, he wrote:

"Sore as hell."

"Doctor, I have a problem. My wife thinks she's a refrigerator."

"Cold, eh?"

"No, doctor, it isn't that. She sleeps with her mouth open, and the little light shines in my eyes."

Philosophy of the Week

For one widow who has been fleeced by an unscrupulous man, ten men have been fleeced by unscrupulous women. — WILLIAM FEATHER.

Eight requisites for good living: *Health* enough to make work a pleasure; *wealth* enough to support your needs; *strength* to battle with difficulties and overcome them; *grace* enough to confess your sins and forsake them; *patience* enough to toil until some good is accomplished; *charity* enough to see some good in your neighbor; *faith* enough to make real the things of God; *hope* enough to remove all fears concerning the future.

The Show Must Go On

Nobody in the Chrysler organization suspected that George Mason's funeral would coincide with their press presentation of Plymouths, Dodges, DeSotos, etc., on the Cranbrook School grounds.

Nevertheless, the George Mason funeral was conducted within earshot of Chrysler's bannered circus tent at the Cranbrook church.

Tex Colbert took the curse off that situation by eulogizing Mr. Mason, and by requesting the assembled writers to pause for a moment of Silent Prayer.

It was a mighty decent gesture.

Shining new autos paraded into the tent, afterward. Newsmen presumably were impressed. Came a lull in the proceedings.

The orchestra leader asked us (those near him) for a "request number."

Clacklike he heard:

"In My Merry Oldsmobile!"

Gags of the Week

Add interesting company names:

The NO O Seat Mfg. Co. in Olney, Ill.

(Concluded on Page 5, Col. 1)

AUDITED PAID CIRCULATION ABC

ARI Conference, RSES Convention To Open Nov. 18

MINNEAPOLIS—Final arrangements are being made for the Air-Conditioning & Refrigeration Institute's Educational Conference and the 17th annual convention of the Refrigeration Service Engineers Society which will be held here next month.

Both the ARI conference on air conditioning and commercial refrigeration and the RSES convention are to be held on Thursday, Friday, and Saturday, Nov. 18, 19, and 20. The RSES meeting will continue for an extra day, concluding with a business session Sunday.

A big turnout is anticipated for the joint events, with many industry members expected from Illinois, Missouri, Iowa, Nebraska, Wyoming, Montana, North and South Dakota, Minnesota, Wisconsin, and Michigan's Upper Peninsula.

Displays will be set up in the Municipal Auditorium by 68 manufacturers, making this one of the largest educational conferences to be sponsored by ARI. Exhibit hours are 3 to 6 p.m. and 7 to 10

(Concluded on Page 4, Col. 1)

NCRSA Convenes In New York Nov. 8-9; Plans Mfrs. Forum

PHILADELPHIA—"Integrating the Distribution Team for Profitable Operation" will be the theme of the eighth annual convention of the National Commercial Refrigerator Sales Association when the group gathers in the Hotel Statler in New York City on Nov. 8 and 9.

While three of the half-day sessions will be devoted to talks on a wide variety of subjects of interest to the commercial refrigeration distributor, the fourth will consist of a forum discussion between distributors and manufacturers. During this Tuesday morning session, distributor and manufacturer representatives will briefly give their views on specified management, sales department, and service problem sub-

(Concluded on Page 17, Col. 1)

Commercial Refrigerator Sales Ratios Show Gains

(See Table on Page 17)

CHICAGO — Percentage ratios for sales of various types of commercial refrigerator products in 1953 to total sales of all commercial refrigerators as reported to the Commercial Refrigerator Manufacturers Association show gains for both conventional and self-service single-duty cases, conventional vegetable refrigerators, and self-service low temperature refrigerators.

Single-duty closed type display cases accounted for 3.5% of the dollar volume last year, compared with 2.8% in 1952, 3.4% in 1951, and 5.4% in 1950. Conventional double-duty cases, however, con-

(Concluded on Page 17, Col. 3)

'Air Conditioning' Is Magic Word

ASHVE Asks Vote on Proposed Name Change

NEW YORK CITY—A proposal to change the name of the American Society of Heating and Ventilating Engineers to the American Society of Heating and Air Conditioning Engineers, Inc. was recently approved by the ASHVE council and will be submitted to a vote of the membership at a special meeting on Nov. 22.

This was announced recently in a joint statement by L. N. Hunter, president, and A. V. Hutchinson, executive secretary. The statement went out to members along with ballots and proxies.

Originally, it had been suggested that the name be changed to American Society of Air Conditioning Engineers and that the matter be decided at the annual meeting in January.

However, Hunter and Hutchinson declared, "it was clear that retaining the word 'Heating' as a part of the name was favored along with 'Air Conditioning.'

"The name now proposed by council, if adopted, would seem to satisfy those who feel so strongly about the desirability of identifying the society more closely with air conditioning as it is understood by the public. Also, the proposed name does not differ substantially from the present name, so that the value of its prestige and goodwill

(Concluded on Back Page, Col. 4)

REWA Adopts New Name To Reflect Interests

ST. LOUIS, Oct. 22—Air Conditioning and Refrigeration Wholesalers is the new name of the association of refrigeration and air conditioning equipment and supplies wholesalers which has more recently been known as Refrigeration Equipment Wholesalers Association (REWA).

Formal action on the name change was taken at the annual meeting of the group held this week in St. Louis. The new organization is incorporated as an Ohio organization with headquarters in Columbus. Starr Hull is the executive secretary. The change in name becomes effective No. 1.

Change in name came about when the members felt that the increasing amount of their total business in the air conditioning field warranted a name for their organization that would more accurately describe their business activities.

The organization was originally formed in 1935 at a meeting held

(Concluded on Page 4, Col. 4)

Perfection Bows 5-Year Plans for Air Conditioners

CLEVELAND—Perfection Stove Co. here recently announced that it will merchandise its air conditioners on a 5-year cost amortization plan as part of a new program tailored to benefit the nation's building managers.

The company said that it also plans to lease air conditioners on a 5-year basis or longer.

On the extended sales and rental plans, complete cost of wiring made necessary by installation of the air conditioning equipment will be financed by the manufacturer. Perfection will also provide five years of free service and parts to those taking advantage of the programs.

Perfection's new air conditioner program, the company said, is designed to ease the burden of cost to building managers. The company is prepared to handle installation of air conditioners on a 12-month basis so that work can be

(Concluded on Page 4, Col. 4)

Nash Air Conditioner Available on '55 Hudson

DETROIT — The Nash automobile air conditioning system will be made available as optional equipment on all 1955 Nash and Hudson cars, George Romney, president of American Motors Corp., announced recently.

Previously available only on the Nash, the factory installed system combines refrigeration, heating, and ventilating all in one integrated unit mounted under the hood.

RCA Names Craig V. P., Gen. Mgr.

NEW YORK CITY—Election of John W. Craig as vice president and general manager of the RCA Victor Home Appliance Div., Radio Corp. of America, effective Nov. 1, was announced recently by Frank M. Folsom, president of RCA.

Craig will supervise the activities of the RCA Estate Appliance Corp. and the RCA Air Conditioning Dept. In performing these duties, he will report to Robert A. Seidel, executive vice president, consumer products, RCA.

Craig has served since April 24, 1953, as president, chief executive officer, and a director of Aluminum Industries, Inc., a major producer of aluminum castings, automotive parts, and aluminum paints. He also has been general manager of that company's three plants in Cincinnati.

Previously, he was vice-president of Avco Mfg. Corp. and general manager of its Crosley Div.

A native of Troy, Ohio, Craig

(Concluded on Page 4, Col. 5)

Servel Forms Advisory Panel of Distributors

EVANSVILLE, Ind.—Formation of an advisory panel of appliance distributors was announced last week by James F. Donnelly, vice president in charge of sales of Servel, Inc., as a major step in the company's "teamwork program" of product development and sales stimulation.

Heads of appliance distributing firms from six different parts of country have been named as members of the first panel, which met with Servel executives at the Lake Shore Club in Chicago last Thursday and Friday.

Members of the advisory panel

(Concluded on Page 4, Col. 5)

Crosley Bows New Line of Appliances

6 Refrigerators, 3 Upright Freezers, 7 Ranges Shown; 'Duo Shelvador' Unveiled

CINCINNATI — A freezer with large-capacity tilt-down door trays and roll-out baskets, an electric range with a deepwell cooker that automatically boils, bakes, fries, or roasts, and a refrigerator that has five different temperatures highlight Crosley's new appliance line.

The complete line consists of six new Crosley "Shelvador" refrigerators—including a freezer-refrigerator, seven electric ranges, and three upright Shelvador freezers which augment the company's three chest-type models.

Suggested list prices of the refrigerators range from $189.95 to $549.95 and those of the ranges from $189.95 to $449.95. The upright freezers are priced at $369.95, $449.95, and $599.95.

Crosley dealers across the country viewed the appliances at recent distributor open houses.

"First Crosley appliances designed by Chicago's Mel Boldt, one of the nation's leading independent appliance designers, the line embodies design and functional concepts that offer consumers a choice of separate appliances with perfectly matched exteriors or a single appliance performing several functions," Crosley said.

At the top of the line is the new "Duo Shelvador" (model RFG-125) freezer-refrigerator which is both a 130-lb. freezer (the "Zero Locker") and a 9.2-cu. ft. refrigerator in a single cabinet.

"The fresh food area, used on the average four times more than the frozen storage area, has been placed above the Zero Locker making it unnecessary to bend or stoop to reach it," it was pointed out.

(Concluded on Back Page, Col. 1)

John Small Elected Quiet Heet Pres.

NEW YORK CITY — John D. Small, who served as chairman of the Munitions Board, U. S. Department of Defense from 1950 to 1952 and who has been executive vice president and a director of Quiet Heet Mfg. Corp., a wholly-owned subsidiary of Emerson Radio & Phonograph Corp., since October, 1953, has been elected president of Quiet Heet.

John D. Small

This was announced recently by Benjamin Abrams, Quiet Heet's board chairman and Emerson's president. Quiet Heet manufactures room, residential, and com-

(Concluded on Page 4, Col. 4)

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XUM

New Automatic Plating Machine Increases Hardware Facilities at National Lock

ROCKFORD, Ill.—National Lock Co. here has recently completed the installation of a custom-manufactured, automatic plating machine at an expenditure in excess of $200,000.

Christened "Big Bertha" by company officials, the 85-ton apparatus will modernize and increase the company's facilities for plating die cast products such as refrigerator hardware, of which National Lock makes claim to being the world's biggest manufacturer. Most of the older, semi-automatic equipment will be replaced by the new machine.

By the beginning of 1950, the company's increased sales of zinc die cast products necessitated additional plating facilities. Plans were in the contracting stage when the outbreak of war in Korea created a shortage of plating materials, such as copper, nickel, and chromium, forcing the company to postpone the project. With the end of fighting in Korea, materials once again became available and plans were resumed.

Specific purpose of the new apparatus is to chrome plate zinc die castings. In preparation for chrome plating, it is first necessary to plate the hardware with copper and nickel. The new machine also has a special system to permit application of a lustrous brass finish.

William C. Geissman, assistant superintendent of the company's finishing division, surmised that many people who are not acquainted with the plating process undergone by hardware think that it consists merely of spraying or dipping in a metallic paint. Actually it is a complicated process.

Before hardware can be plated, surfaces must be buffed and polished to a mirror-like finish. They are then vapor degreased in a solution similar to ordinary dry cleaning fluid. After inspection, the hardware is moved to the plating machine and placed upon racks by hand. The racks are conveyed automatically by gigantic arms through the entire two-hour plating cycle, which involves 27 immersions in tanks, 19 of which are rinses.

In the tanks where the actual plating takes place are special solutions. As each rack, or cathode, containing the hardware is immersed in the solution, the metal, or anode, dissolves in the solution and is electrolytically transferred to and made a part of each piece of hardware.

Following the chrome applica- and rinses, the racks are transferred by a robot from the plating machine to another conveyor. There the parts are further rinsed with deionized water and dried in a special chamber. Throughout the cycle, the hardware is untouched by human hands.

The new machine was designed with wider tanks to handle larger parts and has a plating solution capacity of 4,500 gals. It is equipped with four filters, which purify 3,300 gals. of solution every hour. A 6,000-gal. storage tank was installed in the department for the purification of plating solutions.

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The fourth man to hold this position in the 46-year history of the association, Hooper was formerly editor of *Electrical Wholesaling* magazine. A member of the staff of the magazine for eight years, he has been editor since 1951.

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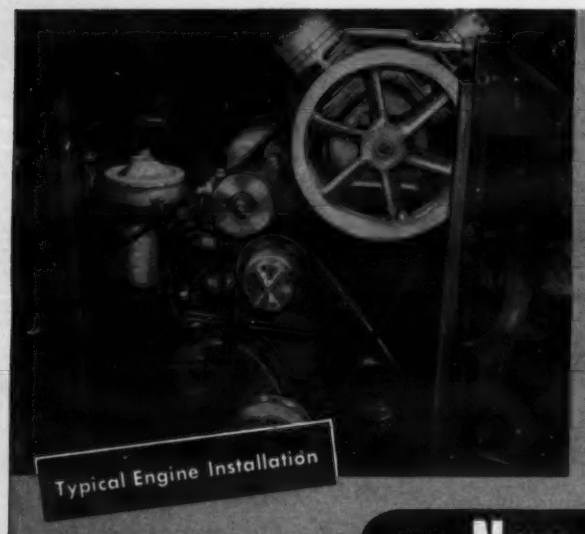

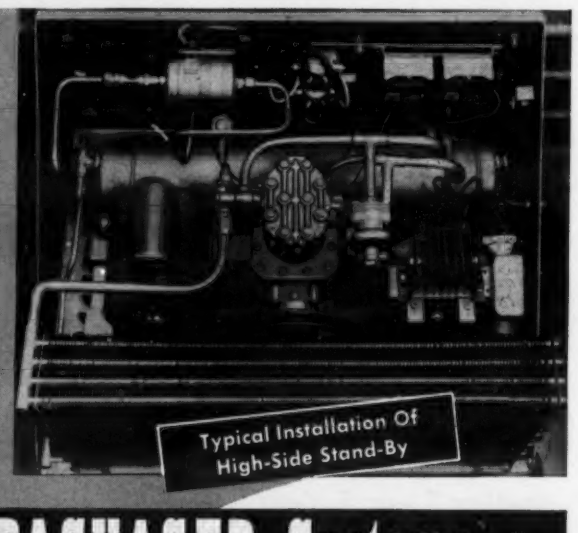

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Also available: REMOTE TYPE TRUCK UNITS
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For ON-THE-ROAD and STAND-BY SERVICE
A Complete, Ready-To-Install Package

Lehigh BLU-COLD
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CONDENSING UNITS AND SYSTEMS
LEHIGH MANUFACTURING COMPANY
Lancaster, Pa.
DIVISION OF LEHIGH FOUNDRIES, INC.
Export Dept. 13 E. 40th St., N. Y.

Manufacturers of Malleable and Grey Iron Castings, Refrigerating Equipment, Air Valves, Automatic Vending Machines

ROOM AIR CONDITIONER
SALES MANAGER

An excellent opportunity for an experienced room air conditioner sales manager with one of the leaders in the refrigeration industry. Must be capable of directing an air conditioning sales and merchandising program and must have national experience in this field.

This is an unusual opportunity with a fast-growing company. Please write giving complete resume of your experience in first letter. All replies will be held in strictest confidence. Address Sales Manager, Amana Refrigeration, Inc., Amana, Iowa.

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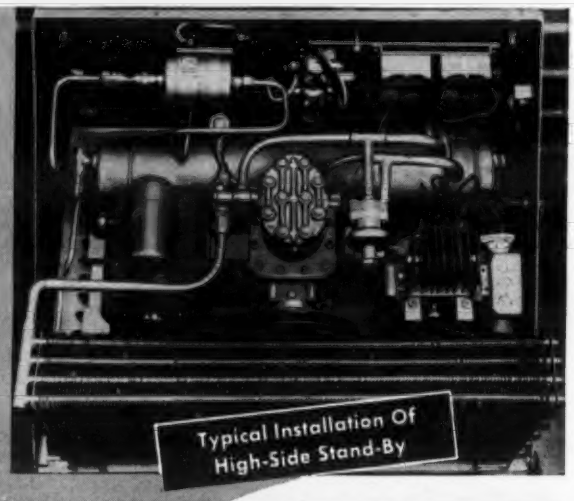

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CONDENSING UNITS AND SYSTEMS
LEHIGH MANUFACTURING COMPANY
Lancaster, Pa.
DIVISION OF LEHIGH FOUNDRIES, INC.
Export Dept. 13 E. 40th St., N. Y.

Manufacturers of Malleable and Grey Iron Castings, Refrigerating Equipment, Air Valves, Automatic Vending Machines

ROOM AIR CONDITIONER SALES MANAGER

An excellent opportunity for an experienced room air conditioner sales manager with one of the leaders in the refrigeration industry. Must be capable of directing an air conditioning sales and merchandising program and must have national experience in this field.

This is an unusual opportunity with a fast-growing company. Please write giving complete resume of your experience in first letter. All replies will be held in strictest confidence. Address Sales Manager, Amana Refrigeration, Inc., Amana, Iowa.

XUM

'Turkey Day' Promotion

Live Toms Let Loose on Sterling's Streets Stir Interest, Stop Traffic on Thanksgiving Day, Scott Says

STERLING, Ill.—For a promotion that will create real excitement, enthusiasm, and public response, Amana distributor Dick Scott here finds it hard to beat the "Turkey Day" stunt he tried last Thanksgiving and will try again this November.

What Scott did was simply drive around this town of some 12,000 inhabitants and, with the help of two of his salesmen, release 22 turkeys one at a time from various street corners. Each turkey was tagged and the person capturing the heaviest turkey was offered an additional prize—a free goose for Christmas.

HEAVY PROMOTION PRECEDED ACTUAL EVENT

Never having tried the idea before, Scott was not sure how it would be received. But he promoted it heavily in newspaper and radio advertising. He also arranged to have the mayor on hand to start off the turkey hunt and to have a police escort for his truckload of turkeys.

"We were surprised and pleased at the number of people that turned out for the turkey hunt," Scott related. "There must have been more than 3,000 people following our truck. Traffic was jammed up something terrible."

"There was so much response that it made real news for the radio station. The radio news reporter told his listeners that it took 45 minutes to fight his way through the traffic to get to the studio. He kept putting out bulletins on the number of turkeys captured and those that were still free.

CAPTORS CALLED NUMBERS GIVEN ON TAG

"When turkeys were caught, the captor was instructed to telephone a certain number—the home of one of our salesmen—and report the tag number of his turkey. In this way we could determine who captured the largest bird."

The response to this promotion was so terrific that Scott said he decided then and there to make "Turkey Day" an annual event. This year, however, he is going to encourage his dealers throughout his northwestern Illinois and southwestern Wisconsin territory to hold similar events in their own town. Dealers, he feels, will have a greater opportunity to tie the event directly to freezer sales than he did.

Scott, who through his Dick Scott Distributing Co. has represented Amana in this area since 1949, said that when he holds his "Turkey Day" this year, he hopes to avoid some of the mistakes made last year.

"We were just lucky that everything went off smoothly last time," he said, "but I can see that there are some precautions that should be taken for an event of this type."

One important step he is going to take this year is to cover the event with accident and property damage insurance. While there was no property damage last year and only one person was hurt—a boy riding on a fender was pitched into the street when the car stopped suddenly—Scott is well aware that any event that draws several thousand people could easily result in damage or injury for which he could be held liable.

FEMALE TURKEYS WILL BE USED NEXT TIME

Another change will be to use light female turkeys rather than the heavy males used last year. The males, he noted, were frightened by the noisy crowd and would cower in one spot rather than try to escape. Police had to protect the bird from being injured when several persons tried to grab him at once.

He believes that the lighter females will fly away and have a better chance to escape injury.

A third change will be an attempt to appease the salesmen's wives. The wives were miffed when their husbands had to help out on the promotion rather than "stay home where they belonged."

Why did Scott choose Thanksgiving Day to hold his promotion rather than some day in advance of the holiday?

"We picked that day deliberately," Scott declared, "to be sure that the whole family would be home and would have time to participate in our promotion."

RADIO FOUND TO BE BEST ADVERTISING MEDIUM

Scott added that he found radio the best advertising medium for this type of promotion. "Radio is faster in its coverage and this type of event is one in which it can participate to fullest advantage," he said.

While last year's turkey hunt was a goodwill builder, Scott hopes that this year's will lead to more freezer sales for dealers.

Orchids for the Women

NIAGARA FALLS, N. Y.—George's Appliance has been opened at 1438 E. Falls St. by George J. Milanovich who has had 18 years' experience in the appliance field. The first 500 women visiting the store on opening day received an orchid.

New Columbia Firm

COLUMBIA, S. C. — McLain-Dennis Heating Co., residential and commercial heating and air conditioning firm, 1050 Dreyfuss St., has announced its recent opening. R. S. McLain is president of the company and C. E. Dennis is vice president.

SPECIALTY SELLING METHODS

'Freezer School' Used by Distributor, Dealer To Introduce Jordon Duplex-20

STATE COLLEGE, Pa. — A "freezer school" for consumers was used here jointly by Jordon Sales Co., Centre Dealers Supply Co., Jordon distributor for central Pennsylvania, and O. W. Houts and Son, Centre County appliance dealer, to introduce the new Duplex-20, combination home freezer and refrigerator in one upright cabinet.

Miss Margaret Greenhut, director of sales for Centre Dealers Supply Co., directed three different instruction sessions. Miss Helen Butler, home economics extension representative for Centre county, conducted the sessions as a community service.

She lectured on how to wrap food for freezing, how to store vegetables, meats, fruits, etc.

To generate interest in the instruction sessions, invitations were sent to all Houts' customers who had purchased freezers. A select list of prospective buyers also was invited. Total number was 500.

Preparatory to the public sessions, cooperative half-hour radio shows, spot announcements, and newspaper space were used to generate interest in Jordon products and the freezer school.

In spite of inclement weather, nearly 250 persons attended.

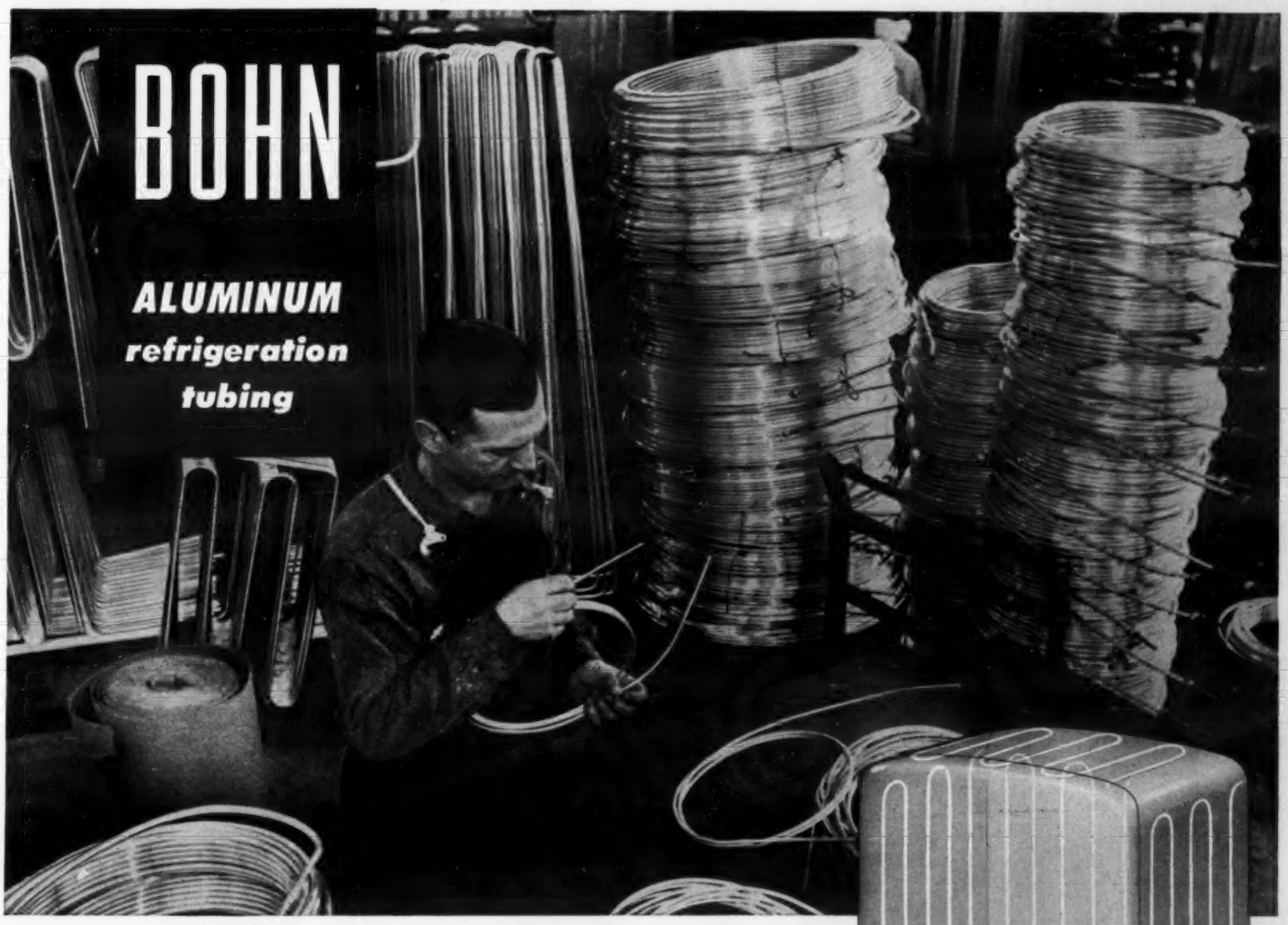
Robert Ishler, O. W. Houts' promotion manager, presided and introduced the Model Duplex, following which Robert Bamberger, Jordon factory sales representative, spoke briefly before the school.

A quick frozen demonstration was given to indicate how rapidly such foods as hamburgers, cut chicken, vegetables, fruits, bread, and cake can be frozen in the freezer compartment of the Duplex. This model features a 10½-cu. ft. freezer on the bottom and an 8-cu. ft. refrigerator on the top.

A total of 91 leads for Jordon domestic products resulted from the one promotion, it was reported.

Wright In New Store

HORSEHEADS, N. Y. — Don Wright, Inc. has opened a new appliance store at Hanover Square. A three-day formal opening was conducted.



More economical • Easier to shape and bend

Bohn aluminum refrigeration tubing helps reduce costs because it is easier to form. It also works more efficiently in the finished product because aluminum is an excellent heat conductor. Bohn aluminum refrigeration tubing is available in bulk coils, specified patterns or cut to required lengths with dependable, flash-butt welded copper leads.

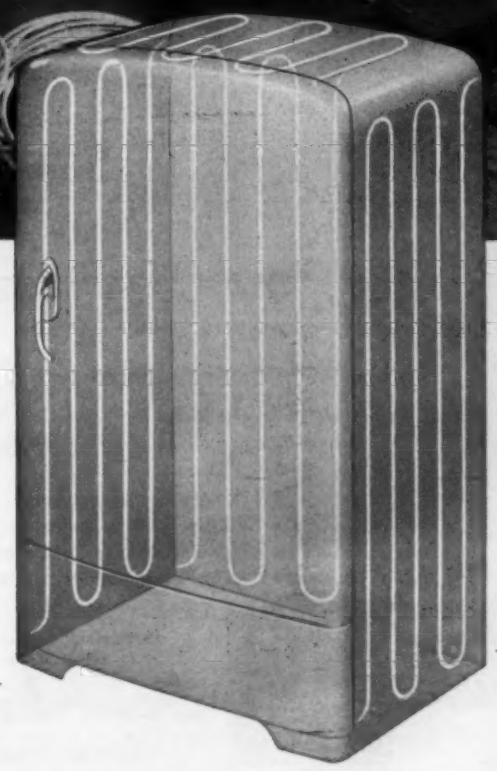
NEW BOOKLET
"Bohn Products and How They are Made."
Write for free copy of this pictorial tour through Bohn plants.

EVAPORATORS • FREEZING PLATES • TUBING • COILS AND CONDENSERS

BOHN ALUMINUM AND BRASS CORPORATION

1400 LAFAYETTE BUILDING • DETROIT 26, MICHIGAN

Sales Offices: • BOSTON • CHICAGO • CLEVELAND • DAYTON • DETROIT INDIANAPOLIS • LOS ANGELES • MILWAUKEE • MINNEAPOLIS • MOLINE NEW YORK • PHILADELPHIA • ROCHESTER • ST. LOUIS



SHELL CONDENSER APPLICATION of Bohn aluminum refrigeration tubing for either chest or upright freezers.

SUPER-FLO
FILTER-DRIER
UP TO 5 TONS
NO PRESSURE DROP
MOLDED REMCAL DRYING
FIBERGLAS DEPTH FILTERING
Check Super-Flo's amazing low price, for both original equipment and replacement, against ordinary driers which do not have Super-Flo molded drying elements, massive fiberglas depth filters and spun-end copper shells. Available to the trade through wholesalers everywhere.
REMCO INCORPORATED ZELIENOPLE, PA.

ARI Conference, RSES Meeting Plans--

(Concluded from Page 1, Col. 2)

p.m. on Thursday and Friday, and noon to 6 p.m. on Saturday.

Hours for the educational program sponsored by the RSES are 9 a.m. to noon and 1 to 3 p.m. on Thursday and Friday, and 9 a.m. to noon Saturday.

RSES headquarters hotel will be the Radisson. The Nicollet hotel will be headquarters for the ARI and exhibitors.

At press time, the speaking program was not yet completed. Among speakers and subjects being scheduled are:

"Sizing and Layout of Refrigerant Lines," Cecil R. Visger, past international president, RSES; "Bulk Milk Cooling Equipment," Leon Buehler, chief refrigerating engineer, Creamery Package Mfg. Co., and first vice president, American Society of Refrigerating Engineers; "'Freon-12' and 'Freon-22' In Food Store Equipment," John H. Spence, service manager, Hussmann Refrigeration, Inc., and chairman, International Educational and Examining Board, RSES.

"Reasons for Compressor Failures," Clayton Cramer, service department, Carrier Corp.; "Oddities In Refrigeration," Dr. W. O. Walker, dean, Division of Research and Industry, University of Miami; "Application, Installation, and Service of Room Air Conditioners," R. J. Thompson, director of service, O. A. Sutton Corp.; "Two-Way Radio for Refrigeration Service," with demonstration, Bernard Gest, district manager, Radio Corp. of America.

The convention will open with the annual RSES business session.

In addition to the speaking program, there will be a get-together party at the Radisson hotel Thursday evening, the annual RSES banquet Saturday evening in the grand ballroom of the Radisson, and a full program of entertainment, sightseeing, and meetings for the visiting ladies.

Entertainers at the banquet will include Sabina Ann, waltzing violinist; West and Mada, musical comedy team; and Wes Barlow's orchestra, which will provide music during the entertainment and for the dancing to follow. Master of ceremonies will be Howard Hardon, who is also an impersonator, comedian, and juggler.

The Seeger Lake-Aires Barber Shop Quartet from Seeger Refrigerator Co. will be a feature of the get-together party.

The Twin Cities Chapter of RSES is host to the convention and conference. The chapter has been working for some time in connection with organization of details for both events.

George Klahn is general convention chairman, Milton Swanson is treasurer, and Ed Johnson secretary. Convention committee chairmen are. A. L. Robertson, hospitality; Floyd Thompson, housing; O. R. Kreutziger, entertainment; Leopold Zolen and Miles A. Chadwick, registration; Raymond J. Farmer and Orris O. Ordahl, program; and E. F. King and Robert Huston, publicity.

Herbert M. Dupaul is educational coordinator; Harold Ahrndt, auxiliary coordinator; and Art M. Palen, inter-association coordinator. The Twin Cities section of ASRE, RACCA of Twin Cities, and region 7 of REWA will be cooperating in the convention, according to Palen.

The Manufacturers' Service Managers' Club of the RSES has scheduled a meeting in connection with the convention. It will be held Saturday, Nov. 20, with Dr. W. O. Walker and Roger Dowling, general service manager of York Corp., as speakers.

Tours and visits to any of the refrigeration equipment manufacturing plants in the Minneapolis-St. Paul area and the Dunwoody Institute are invited. Visits will be confined to Thursday and Friday. Those interested in such visits should write to Archie Robertson, hospitality chairman, 805 Russell Ave. No., Minneapolis 11, Minn.

As noted, the Radisson and Nicollet will be the RSES and ARI headquarter hotels, respectively. Reservations at other convenient hotels may be made by writing Floyd Thompson, housing chairman, 1840 Georgia Ave., Minneapolis 16, Minn.

List of Exhibitors

A-P Controls Corp.	25
Acme Industries, Inc.	60
Alco Valve Co.	32
Ansul Chemical Co.	35
Arrow-Hart & Hegeman Electric Co.	10
Bell & Gossett Co.	28
Brunner Mfg. Co.	24
Bryant Heater Div., Affiliated Gas Equipment, Inc.	41
Bush Mfg. Co.	58
Carver Pump Co.	77
Century Electric Co.	23
Chemical Solvent Co.	21
Copeland Refrigeration Corp.	26
Curtis Refrigerating Machine Div., Curtis Mfg. Co.	49
Davison Chemical Co., Div. of W. R. Grace & Co.	43
Dean Products, Inc.	5
Detroit Controls Corp.	48
E. I. du Pont de Nemours & Co., Inc.	53
Electric Auto-Lite Co.	59
Eston Chemicals Div., American Potash & Chemical Corp.	61
Flexible Tubing Corp.	38
Friez Instrument Div., Bendix Aviation Corp.	18
General Controls Co.	6
Halstead & Mitchell	72
Heat-X-Changer Co., Inc.	57
Henry Valve Co.	40
Imperial Brass Mfg. Co.	55
Jarrow Products	67
Kelvinator Div., American Motors Corp.	33
Kerotest Mfg. Co.	37
Kramer Trenton Co.	50
La Crosse Cooler Co.	31
Larkin Coils Co.	34
Lehigh Mfg. Co.	73
Linde Air Products Co.	11
Liquid Carbonic Corp.	4
McIntire Co.	16
McQuay, Inc.	46
Jas. P. Marsh Corp.	44
Mueller Brass Co.	66
Meier Electric & Machine Co.	14
Marby Co.	15
Metals & Controls Corp., Spencer Thermostat Div.	22
Paragon Electric Co.	45
Penn Controls, Inc.	70
Plasti-Kote, Inc.	19
Ranco Inc.	30
RCS Tool Sales Corp.	74
Refrigeration Appliances, Inc.	62
Remco, Inc.	71
Reynolds Metals Co.	39
Robbins & Myers, Inc.	36
Servel, Inc.	27
Shield Co., Inc. (Portable Air Cooler Co.)	69
Sporlan Valve Co.	75
Standard Refrigeration Co.	29
Superior Valve & Fittings Co.	13
Tecumseh Products Co.	17
Temprite Products Corp.	42
Tranter Mfg., Inc.	51
United Refrigerator Co.	9
United Wire & Supply Corp.	68
U. S. Air Conditioning Corp.	20
Virginia Smelting Co.	7
Wabash Mfg. Co.	8
Wagner Electric Corp.	52
White-Rodgers Electric Co.	76
Wolverine Tube, Div. of Calumet & Hecla, Inc.	56

REWA Name Change--

(Concluded from Page 1, Col. 4)

in the offices of AIR CONDITIONING & REFRIGERATION NEWS in Detroit, and was first called the "National Refrigeration Supply Jobbers Association." A few years later it changed to the "REWA" name.

The general structure of the officer and board of directors setup of the wholesalers' organization will be retained, which includes the division of the country into 11 regional setups. In the United States the Air Conditioning and Refrigeration Wholesalers membership operate 368 warehouse spots with complete stocks in 191 principal cities. Since the last meeting 19 new members have been added to the organization.

During the meeting 15-year membership awards were made to Allied Supply Co., Inc., Dayton; Albert Hofeld, Inc., New York City; The W. H. Fiefaber Co., Dayton; Leinart Engineering Co., Knoxville, Tenn.; Noland Co., Inc., Newport News, Va.; United Refrigeration Supply Co., Memphis, Tenn.

Small Elected--

(Concluded from Page 1, Col. 5)

mercial air conditioning units as well as oil burners and is located in Newark, N. J.

Abrams simultaneously announced the elections by the Quiet Heet board of directors of Bruno Sachs, vice president, to vice president and assistant to the president; Louis G. Pacent, Jr., works manager, to vice president in charge of manufacturing; Paul Komroff, chief engineer, to vice president in charge of engineering; and Raymond Herzog to secretary. Joseph Longin continues as treasurer.

Perfection Plan--

(Concluded from Page 1, Col. 3)

completed anytime the building manager or tenant wishes. Its "inside the window glass line" feature on its room air conditioners solves window washing and other maintenance problems, the manufacturer contends.

At the same time, Perfection announced that it has recently opened new air conditioner headquarters in New York City at 270 Park Ave. Building. Murray Albaum has been appointed head of the metropolitan New York commercial air conditioner sales area.

Albaum was formerly sales manager for New York distributors handling Fedders and Mitchell air conditioners.

JOHN W. CRAIG

RCA Names Craig--

(Concluded from Page 1, Col. 4)

was graduated from the University of Dayton in 1929 with a degree in mechanical engineering. Before joining Crosley in 1937, he had been associated for eight years in the engineering department of the Frigidaire Div., General Motors Corp.

During World War II, Craig helped to develop and improve the Mark XIV anti-aircraft gunsight and participated in other important armament developments. For this work on Navy Ordnance, he received from the Navy Department the Bureau of Ordnance Development Award.

Servel Panel--

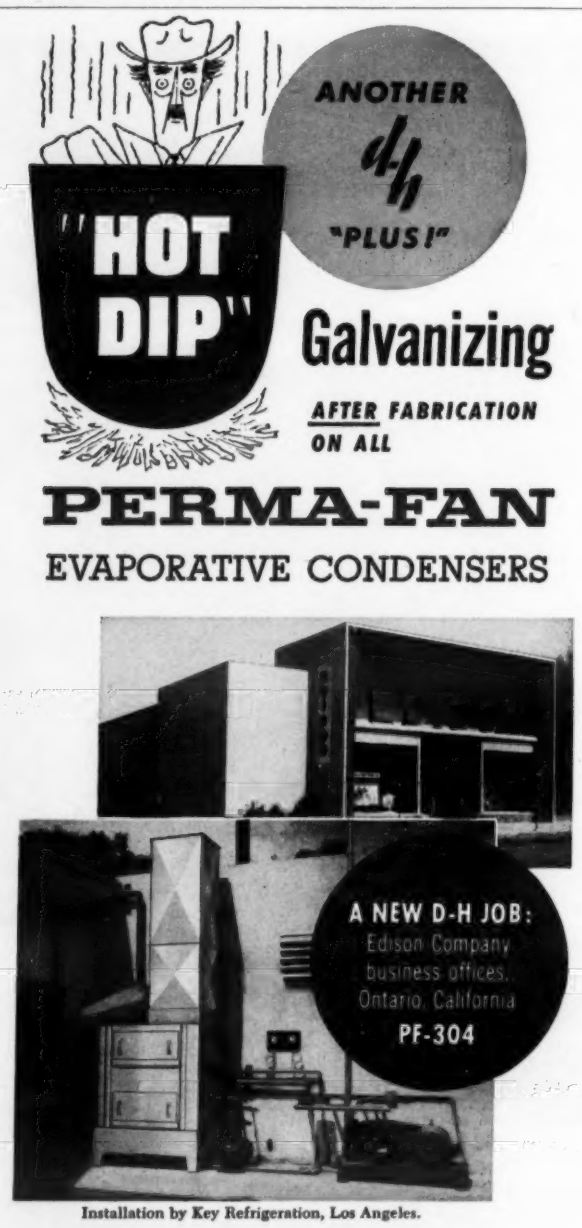
(Concluded from Page 1, Col. 4)

are: Leroy Williams, president, J. A. Williams Co., Pittsburgh; L. S. Hart, president, Hart-Greer, Inc., Birmingham, Ala.; Herman Hollander, president, Hollander & Co., Inc., St. Louis; Carroll Willis, president, Siebert & Willis, Inc., Wichita, Kan.; C. K. S. Russom, owner, Russom Wholesale Distributors, Fort Worth, Texas; and C. A. Miller, president, Gas Appliances, Inc., Los Angeles.

Servel was represented at the Chicago conference by Donnelly, Louis Ruthenberg, board chaiman; Duncan C. Menzies, president; Neal E. Schuman, appliance field sales manager; and D. R. Meckstroth, manager of sales operations.

"One of Servel's major objectives," Donnelly said, "is to develop a program that will be profitable and otherwise satisfactory to Servel distributors and dealers. Close contact and frequent consultation with distributors are essential in order to reach that objective."

All Servel distributors have been invited to suggest matters for consideration by this group. Membership in the panel will be rotated from time to time.



Installation by Key Refrigeration, Los Angeles.

IT'S SERVICE-FREE PERFORMANCE with Perma-Fans—ever since D-H pioneered the blow-thru principle of operation, back in 1937!

NOW, new and proven advances give you an expanded Perma-Fan line:

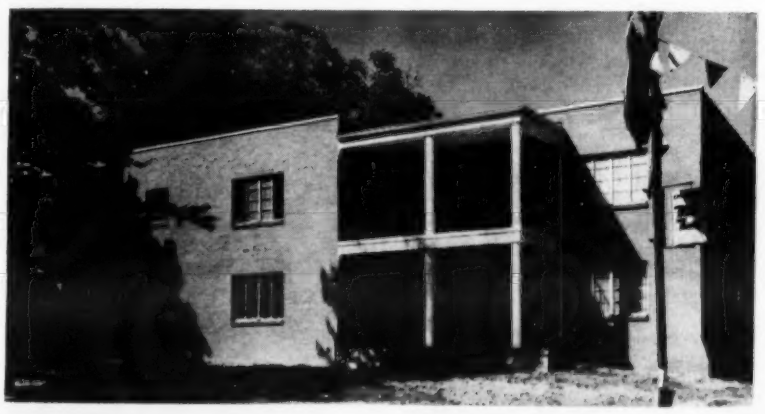
- In tonnage ratings from 5 to 105
- For indoor or outdoor installation
- Choice of refrigerants: Freon, Ammonia
- "Hot Dip" galvanizing on ALL surfaces

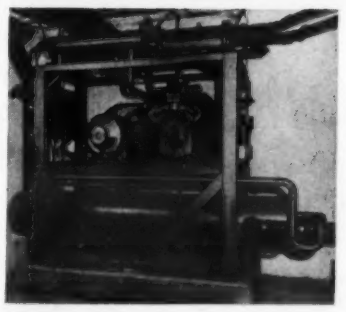
Particulars? Request Catalog PF C-3.30.

d-h SINCE 1910 drayer-hanson INCORPORATED

3301 MEDFORD STREET, LOS ANGELES 63, CALIFORNIA

(A Subsidiary of United States Radiator Corporation)





Schnacke Thermatrol Water Chiller Chosen for Folsom Apartments

Schnacke Thermatrol Chilled Water Unit Model CFD-15-35 is integrated with hot water boiler for summer-winter air conditioning of the Folsom Apartments, Boonville, Indiana. Thermatrol package chillers are available in sizes from 10 to 60 tons, at 35° and 40° in standard models. The "S" line offers specification design to meet any requirement, easily selected to fit the job.

Write for complete engineering data. SCHNACKE, INC. 1105 Governor St. Evansville, Ind.

INSIDE DOPE

Learn to live and laugh— Thus delay your epitaph

By GEORGE F. TAUBENECK

(Concluded from Page 1, Col. 1)

By the time a woman can pay a fancy figure for her clothes, usually she doesn't have one.

Love your enemies. It will drive them to distraction.

Ten centuries from now man will have no teeth, opines a cosmic scientist. It is doubtful, however, if that toothless man could gum up things more than mankind is doing now.

A man never knows how his wife suffers. Unless, of course, he listens.

It takes *you* to make an argument.

Perhaps the most gratifying feature of life is that both the king and beggar can live but a moment of it at a time—DOUGLAS MEADOR.

Man may not live by bread alone. But many try to get along on crusts!

The hot inspiration of tonight is often the cold perspiration of tomorrow.

The honeymoon is over when the dog brings your slippers and your wife barks at you.

An Old Timer is a fellow who remembers when a man did his own withholding on his take-home pay.

Leading Communist newspaper in Czechoslovakia is entitled:
RUDE PROVO.
That figures.

Definition of a Secretary:

She looks like a girl, thinks like a man, acts like a lady, and works like a horse.

Verse of the Week

If you've never had a freezer
And have gone along without
Then you've sacrified a blessing,
There is very little doubt.
You have missed the greatest rapture
Just as certain as it's true.
If you've never had a freezer
All our pity goes to you.
—TOM MCMANN

What's Happening at Servel?

Following excerpts from a speech to employes delivered by Servel's new president, Duncan Cameron Menzies, may glean an inkling of his attitude toward our industry. Quote:

"I assure you that no important policy decision will be made at Servel, as long as I am President, without first exploring all angles with those responsible for carrying out the decision. And none will be made without the full approval of the Chairman of the Board. . . .

"Servel is a member of a multi-billion dollar industry. The industry is progressive and is growing fast. It is subject to violent swings. It has to contend with unpredictable seasonal variation. It is fiercely competitive and getting more so. . . .

"To succeed in this industry we must offer products that meet the customer's requirements in every respect. They must be dependable and trouble-free. They must be manufactured at a cost that will permit competitive prices and still leave a profit for the men and women who have risked their savings to provide the facilities and the working capital for our business. It's a tall order, but it can be done.

"Every employe has a right to know the purpose behind our objectives and policies. Only when he has understanding, and when he himself believes in our objectives and policies, will he be able to put that part of himself into it which spells the difference between a mediocre job and a satisfying and successful job.

"From personal experience in many countries I know the American workman to be the world's finest. Give him understanding, develop his interest, and he will produce dependable products at low cost.

"Each employe at Servel is entitled to two paychecks—the one that buys the groceries, and the one that provides pride and personal satisfaction in a job well done.

"I think this is the place and the time to announce that Mr. Ruthenburg and I will work together as a team. He has an intimate knowledge of all phases of this business. He looks at the past only as a guide to the future. His judgment is profound. He numbers the giants of the great gas industry as his personal friends. He is revered by the employes of Servel and the Evansville community alike. Without his assurance that his help, guidance, and counsel are available to me, I should not be here."

Our New Book

Frequently friends of "Dope" inquire:

"Are you writing another book?"

Shame-facedly we've replied negatively, for two reasons:

(1) We'd like to get a little fun out of life from now on: instead of piling extra work (nights, weekends, Sundays) atop a demanding full-time job.

(2) Couldn't think of anything inspiring to write about.

Here and now, however, we admit that the current DO-IT-YOURSELF mania is stirring our stumps. We're tempted mightily to write another book, which will be entitled:

"How to Get Out of Doing It Yourself."

On that subject "Dope" is an expert veteran.

Preliminarily, we figure that this book should sell at least 26,000,000 copies—to husbands.

Post Scripta

Every man should look forward to the feeling of relief that must be enjoyed the moment he realizes that the world can get along without him.—HARVEY CAMPBELL.

I do not think that the sum of human misery has ever in the past been as great as during the last 25 years.—BERTRAND RUSSELL.

Ever Hear of Di Maggio?

Hammond and Goff, an industrial advertising agency of Providence, R. I. (handling Kinney Mfg. and Whitlock Mfg. Co. in our industry) hired a new secretary recently. Her name, Marilyn Monroe.

Robert L. Hammond, V.P. of the agency, reveals that the girl was interviewed by Carleton Goff, agency president. It seems that Mr. Goff's interests do not include the realm of movies. And so, after hiring this young lady he blandly announced he had employed a Miss Marilyn Monroe. He couldn't understand why the announcement created such a furor.

Next day he told Mr. Hammond he felt a little bit better about his innocence. He had told his wife about the incident, and she hadn't heard of THE Monroe, either.

How highbrow can you get?

Add Lincoln Stories

Here's a tale "old Abe" told to deflate gently office aspirants who aimed too high.

"Fellow put his stovepipe hat on an empty seat. A fat woman sat down on it. She was overly concerned.

"If you had asked me, madam," he chided, "I would have told you my hat couldn't fit you."

Inside Latches for the Lockers, Please

Upon hearing that a safe place to hide from an atomic bomb is a frozen food cabinet, Richard Armour was inspired to pen the following:

Move over, ham
And quartered cow,
My Gieger says
The time is now.

Yes, now I lay me
Down to sleep
And if I die,
At least I'll keep.

Caboose Thoughts

A mature person is one who does not think only in absolutes, who is able to be objective even when deeply stirred emotionally, who has learned that there is both good and bad in all people and in all things, and who walks humbly and deals charitably with the circumstances of life, knowing that in this world no one is all-knowing and therefore all of us need both love and charity.—ELEANOR ROOSEVELT.

The newsstands are loaded with magazines for young adults, homemakers, men on the way up, leaders of tomorrow, outdoorsmen, and hobbyists. Couldn't there be one, admittedly of small circulation, for people who just like to read?—*Detroit News.*

Reynolds In Westinghouse Air Conditioning Div. Post

STAUNTON, Va.—James C. Reynolds has been appointed manager of the newly-created central district for the air conditioning division of Westinghouse Electric Corp., it was announced here recently by W. B. Cott, sales manager.

Reynolds will locate his office in the Union National Bank building at Pittsburgh. He will be responsible for sales of Westinghouse air conditioning products within the division's new central district which includes all of Ohio, West Virginia and Kentucky, western Pennsylvania, most of Michigan, and portions of Maryland and Indiana.

Reynolds attended Carnegie Institute of Technology, receiving a Bachelor of Science degree in mechanical engineering in 1937. After service with National Tube Co. in McKeesport, Pa., he joined the Westinghouse emergency products division in 1941, transferring to the company's manufacturing and repair division in 1942.

For the past 10 years, Reynolds has served with the sales department of the Westinghouse air conditioning division, where his duties have been in application engineering and service. He is a member of the American Society of Heating & Ventilating Engineers.

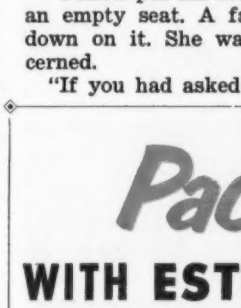
Demand IS FOR
CLEANABLE
WATER-COOLED
CONDENSERS
½ to 25-Ton Capacity
MORE EFFICIENT DOUBLE-TUBE COUNTER-FLOW DESIGN
"New unit" efficiency is always maintained with H & M water-cooled Condensers because they are cleanable—quickly, economically. Do as the industry does—demand nothing less, for the cost is no more. Write for Catalog.
WHOLESALERS IN PRINCIPAL CITIES
Halstead & Mitchell
BESSEMER BLDG. • PITTSBURGH 22, PA

Packaged or in Bulk—

WITH ESTON YOU GET THE COMPLETE REFRIGERANT LINE

Eliminate the costly and inconvenient charging rack with Charg-A-Can® packaged refrigerants. These new labor and time-saving disposable containers require no deposit, assure no waste, control purity and permit accurate charging. Convenient Charg-A-Cans also eliminate the necessity of heavy storage and transportation equipment.

All Eston refrigerants are filled under carefully controlled factory conditions, with material expertly analyzed for purity and moisture content.



DISPENSER VALVE—Pictured (above) is the new improved dispenser valve for use with ALL Charg-A-Cans.

TRONA INDUSTRIAL AND AGRICULTURAL CHEMICALS

ESTON CHEMICALS DIVISION

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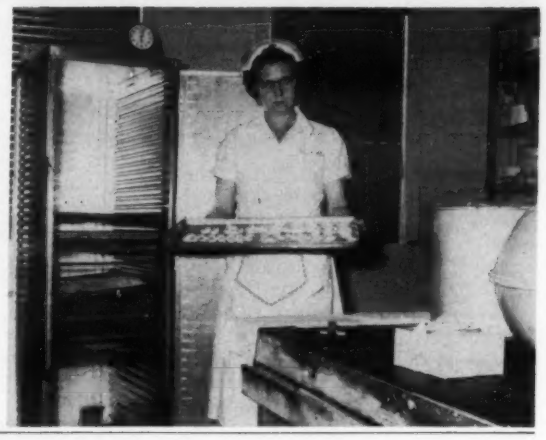
Controlled Temperatures Make Assembly-Line Techniques Possible

Bakery Eliminates Rush Periods by Making Up Cake Decorations Ahead



THIS AIR CONDITIONED ROOM, kept at 75°, helps preserve delicate sugar cake decorations from Monday until rush days at the end of the week for Ellerbrock Fine Bakeries of St. Louis.

ST. LOUIS — Exactly-controlled temperature in the new tile-lined custom cake decorating room of Ellerbrock's Fine Bakeries here has made possible "assembly-line methods" in meeting a heavy demand for custom decorated cakes.

The Ellerbrock concern, operating five bakeries in the St. Louis area, has for many years specialized in custom-decorated cakes for birthdays, parties, anniversaries, weddings, etc.

Under past methods, each cake was individually handled, including baking, icing, decorating with colorful flowers, birds, seasonal motifs, etc., and, of course, the greeting or name spelled out.

Today, however, with custom-cake orders reaching a volume as high as 60 a day, it has been impossible to keep up with the demand on an "individual operation" basis, according to Richard Marklin, Ellerbrock's full-time decorator.

Consequently, a program of making up decorations "in advance," for swift application to custom cakes during the busy period, was developed.

In order to keep the delicate fondant-icing decorations in perfect condition, low temperatures are required, Marklin pointed out. Thus, the 18 by 26-ft. decorating room is equipped with a thermostatically controlled 5-ton air conditioning unit, which maintains the temperature at an even 75° the year around.

Custom-cake decorations, using the familiar "squeegee" syringes, are made up in a dozen colors on Monday and Wednesday mornings, dropped on individual sheets of waxed paper, and stored on stainless steel racks in a dustproof, stainless steel container.

From 10 to 12 racks are made up at a time, according to Marklin's estimate of the week's volume, and held over until Thursday, Friday, and Saturday "rush" when volume is at its peak.

Marklin uses five turntables, atop one of the three hardwood tables in the decorating room, to produce five cakes at once. Orders are bracketed to incorporate all of those for the same color of icing and decoration in groups.

Refrigeration also makes it possible for the Ellerbrock central bakery to maintain three "stand-by" birthday cakes, ready iced, and available for sudden emergencies, such as last-minute orders or accidents.

Kept in a convenient reach-in refrigerator, the "made-up" cakes are simply pulled out, inscription applied, and decorations chosen from the stock on hand.

Commercial Refrigeration

Huge Ice Rink Set for $4 Million Coliseum; Air Conditioned Auditorium Also Planned

HARRISON, N. J.—Worthington Corp. refrigeration equipment will provide artificial ice for a large rink planned as one of the facilities to be offered by one of America's largest coliseums now under construction at Charlotte, N. C.

The coliseum is circular-shaped and its roof will be the largest structural steel dome in the world, spanning over 332 ft. at extreme diameter. Also under construction on the site and adjacent to the coliseum, is an ultra-modern, air conditioned and sound-proofed auditorium.

Both structures are scheduled for completion in April, 1955, and are being built at a cost of four million dollars.

Refrigeration equipment for the rink is being furnished by Amreco, Inc., Minneapolis, distributor for Worthington (also manufacturer of industrial, pumping, construction, and air conditioning equipment).

It includes two ammonia compressors each capable of producing 80 tons of refrigeration with 22 lbs. suction pressure, 10° super heat, 185 lbs. discharge pressure with each driven by 125-hp., 720-r.p.m. motors through direct coupling; two brine pumps each rated at 450 g.p.m., for circulating brine through the piping system; and one monobloc spray water pump.

Designed to accommodate a wide range of sporting and entertainment events, the coliseum will have a seating capacity of 10,000 with portable seats provided to increase capacity to 13,500 when necessary.

In spite of this enormous seating capacity, isles and passageways have been designed so that building can be emptied within four minutes. The structure will be equipped with overhead type doors to be used to partition off certain areas, and on the second level, a large glass enclosed concourse will surround the entire seating area.

The auditorium will feature a 100 by 50-ft. stage with a 60-ft. proscenium and will have a seating capacity of 2,500. Acoustic system has been planned so that those in extreme rear of building can hear without difficulty.

Located on Charlotte's six-lane Crosstown Blvd., these buildings will be within 15 minutes' driving time from the heart of the city.

Architect is A. G. Odell, Jr. & Associates, Charlotte.

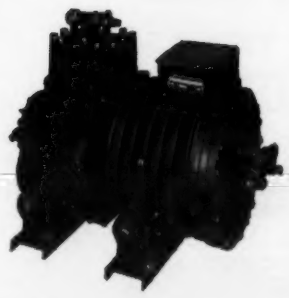
Hamsters Revived After Being Frozen Half-Hour

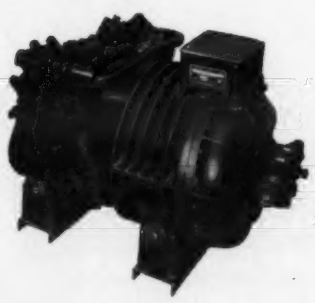
LONDON, England—During recent experiments, hamsters were frozen hard as wood and then revived without suffering any ill effects, according to *The London Daily Express*.

In the experiments, conducted at the British National Institute for Medical Research, breathing of the animals stopped and the heartbeat and other signs of life disappeared as the hamsters were painlessly refrigerated. Some of them were kept frozen for half an hour.

The animals were revived by playing a beam of light on their chests. Their hearts began to beat and they started to breathe. Shortly, they were running around in normal fashion.

Weeks after the experiments, the hamsters showed no evidence of frostbite or other injury, the newspaper said.





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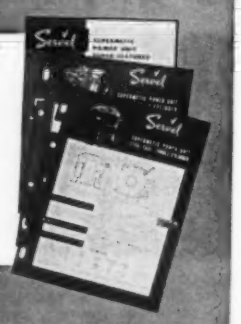

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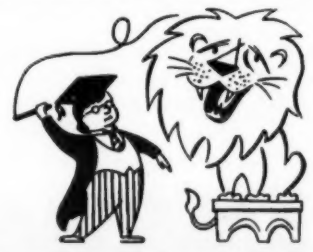

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Residential
Air Conditioning

In Midwest, East

Builders Consider Year-Round Air Conditioning a Must In Homes Costing $15,000 and Up

WILMINGTON, Del. — Year-round air conditioning is rapidly being considered a necessity rather than a luxury in about nine out of 10 new homes in the $15,000-up class, many builders feel, and generally is rated as the most important stimulus to new home sales in the last year.

That's the opinion, as least, of five contractors in scattered sections of the Middle West and East, based on their experience with multi-home developments during the last two years. Buyer interest is so high, they say, that in almost all cases they're now including air conditioning automatically in even speculative developments and have found that the slight additional increase in purchase price and mortgage payments is no barrier to sales even in those cases when the prospective purchaser had not included air conditioning in his plans.

(The opinions were collected by the advertising department of Kinetic Div. of E. I. Du Pont de Nemours & Co. for use in a series of advertisements in publications directed to the builder field, for the purpose of broadening the base of the home air conditioning market.)

Comfort Is Chief Sales Point

Comfort cooling alone has proved to be about the only argument needed to "sell" the home buyer in the majority of cases, with minor emphasis on health benefits, slower obsolescence, and high resale value of the property.

Typical of builder comments is that of Ervin E. Peterson, president of Peterson Construction Co. of Lincoln, Neb., who foresees within 10 years almost universal use of mechanical air conditioning in homes selling for $15,000 and up.

"The time is very near when summer cooling will be considered as much a necessity as insulation," Peterson observes. "The minimum price at which air conditioning ceases to be a luxury and becomes a necessity is between $15,000 and $20,000 so far as total home cost is concerned. Above that price, I already consider it a 'must.'"

Contractor Cites Costs

Current Peterson developments in Lincoln include about 300 homes in three different areas. He's installing 2-ton units for $820 when included in the original plans, with the same size unit priced at $900 when added after completion of the home. The cost of such a system when added to a typical 25-year mortgage, he notes, amounts to an additional down payment of only $164, plus an additional monthly cost of about $3.90.

"That isn't a hard item to sell when the client considers the pleasure, health benefits, efficiency, and low-cost insurance against obsolescence" afforded by the air conditioning system, he says.

Those same views are voiced by Louis Pflager, Oklahoma City builder who constructs an average of 30 "Test Mark" homes per year, mostly in the $25,000 to $50,000 price range. Nine out of 10 of these are air conditioned, he notes, adding:

"I'd say without reserve that in the future at least 90% of the homes from $25,000 up will be fully equipped with air conditioning. The selling points are so many, but you can't get around plain comfort.

"We're to the point now where we just figure air conditioning in as part of the cost of the home. Naturally, a buyer wants to cut corners, but we sell him on the fact he has to live in that home 365 days each year . . . and a great number of those days are going to be hot."

Pflager figures that air conditioning costs no more than $1 per foot in homes in the 3,000-sq. ft. range.

'Greatest Single Sales Stimulant' In New Jersey

In the East, where high humidity is often more of a problem than high temperatures so far as summer comfort is concerned, James D'Agostino, Tenafly, N. J., builder, says "Air conditioning has proven to be the greatest single sales stimulant in the home building field."

Catering to purchasers in the $28,500 to $35,000 range, D'Agostino observes:

"A luxury a few years ago, air conditioning has grown into a necessary part of everyday living and in my opinion we are only about two years removed from a situation which will demand that all homes have air conditioning. This feeling is reflected by our customers now. They are air conditioning conscious; they are thinking ahead, and would not consider investing in a home without it."

Maintenance of humidity at a comfortable level is a much more important factor than cooling so far as his customers are concerned, D'Agostino says, and relief from hay fever suffering is a close second among selling points. Reduction of house cleaning through provision of a filtered, dust-free air supply is a relatively minor point so far as purchasers are concerned, he finds.

In Haddonfield, N. J., M. A. Sarshik, president of the 20th Century Construction Co. and former president of the Home Builders League of South Jersey, says all of the 85 homes in the $15,000 to $18,000 class which he built recently in the Haddon Hills section of Haddonfield were sold within six weeks, largely because of air conditioning.

Won't Consider Building Another Home Without Cooling

"We are so pleased with the effects of air conditioning on the home building market," Sarshik observes, "that we would never consider building another home without air conditioning. Air conditioning has proved that it makes for cleaner homes, healthier homes, reduces colds, affords relief from hay fever and other alergic conditions, and offers a much higher sales appeal."

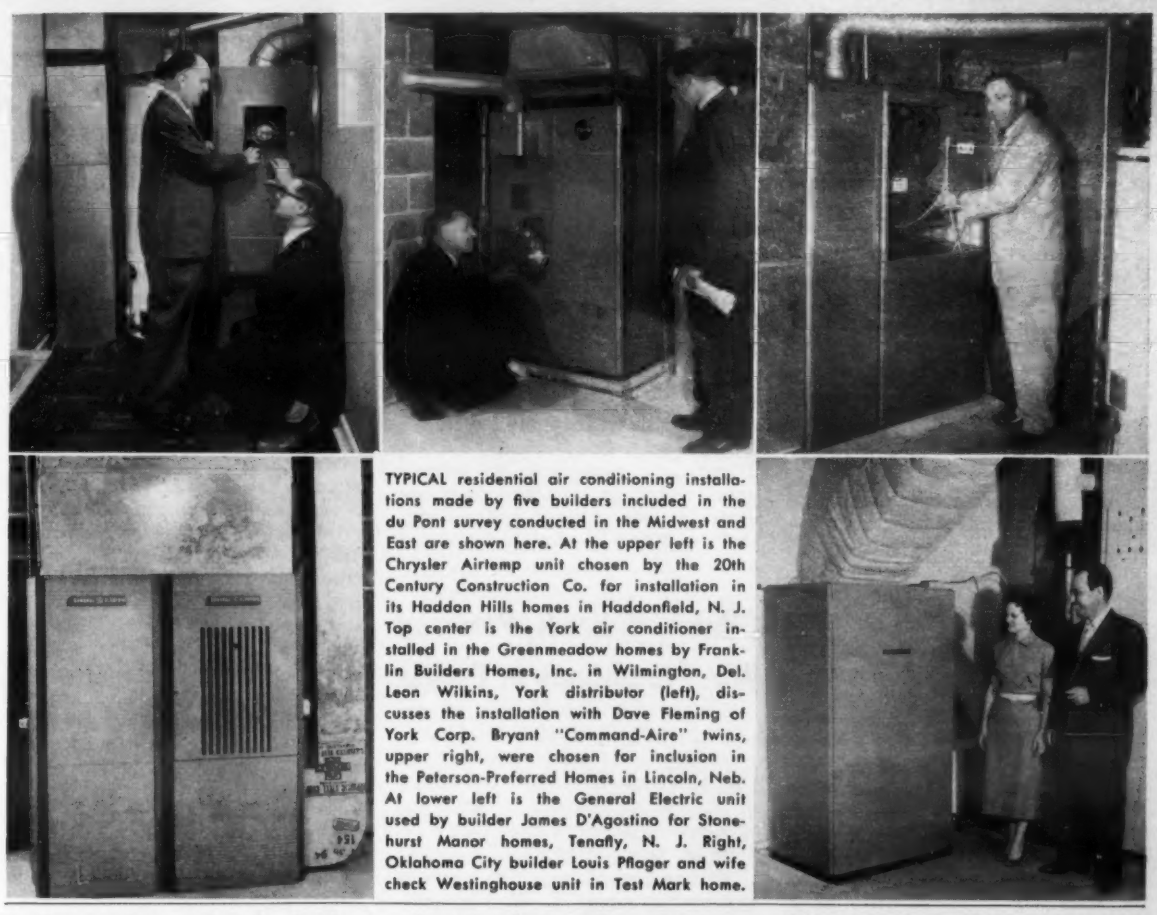
Relief from hay fever is a particularly potent selling point among Sarshik's customers, who, he says, have found that a pollen count of 700-800 outdoors has been reduced to 30-40 inside the air conditioned home.

Economy of operation is also a big sales argument with Sarshik who said he's determined that the average air-cooled air conditioning system installed in his homes adds no more than $60 a year to the homeowner's electric bill. Including the cost of the air conditioning in the original purchase also adds no more than $5 per month to the purchase price, he further explained.

In Wilmington, Del., another area where it's usually the humidity rather than the heat that makes summers uncomfortable, the first all air conditioned development of 170 homes in the $18,000 class was completed last year in the Lynnefield section and developers credit air conditioning as one of the biggest factors in home sales. Comfort cooling alone was a sufficient sales argument in practically all cases, they said, and it was seldom necessary to stress other benefits of the year-round cooling-heating system.

At least three other air conditioned developments are under way in the Wilmington area at the present time and Leon Wilkins, York distributor in the area, noted that he alone has installed more than 400 tons of residential air conditioning there in the last year and a half.

Units generally are operated only intermittently, and an initial survey conducted by Wilkins among customers who've had the systems installed in their Lynnefield homes for a year indicate air conditioning operating costs average about $70 per year for a 2-ton system.



TYPICAL residential air conditioning installations made by five builders included in the du Pont survey conducted in the Midwest and East are shown here. At the upper left is the Chrysler Airtemp unit chosen by the 20th Century Construction Co. for installation in its Haddon Hills homes in Haddonfield, N. J. Top center is the York air conditioner installed in the Greenmeadow homes by Franklin Builders Homes, Inc. in Wilmington, Del. Leon Wilkins, York distributor (left), discusses the installation with Dave Fleming of York Corp. Bryant "Command-Aire" twins, upper right, were chosen for inclusion in the Peterson-Preferred Homes in Lincoln, Neb. At lower left is the General Electric unit used by builder James D'Agostino for Stonehurst Manor homes, Tenafly, N. J. Right, Oklahoma City builder Louis Pflager and wife check Westinghouse unit in Test Mark home.

- Solid TEFLON Diaphragm gives added assurance against leakage or failure. Chemically stable. Impervious to all refrigerants. Will withstand unlimited openings and closings. Soft seat provides positive shut-off and extreme ease of operation.
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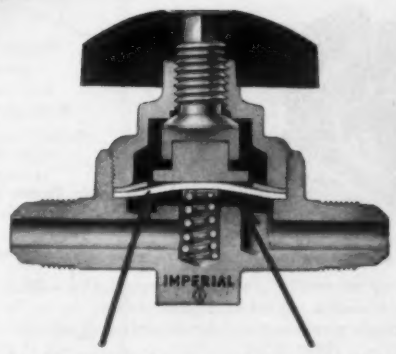

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Permagum Holds Bushings

A small amount of Permagum placed in the cups and on the tops of bushings will hold the mounting bushings in place when replacing top-mounted evaporators in refrigerators.

* * *

By-Pass Lets Small Drier Handle Large System

Driers in smaller, less expensive sizes can be installed practically on large systems such as those used for air conditioning if a by-pass arrangement is employed, points out Louis A. Wallace, who is senior refrigeration engineer, Ansul Chemical Co.

In the past, he explains, "driers for large systems have been sized for pressure drop characteristics rather than for the amount of desiccant actually needed. They have been costly to stock, cumbersome to handle, and time consuming and expensive to service."

These problems can be avoided by installing a small drier in a by-pass from the main refrigerant line, preventing pressure drop and reducing costs, etc.

Only a portion of the refrigerant goes through the drier on any one pass, but in the course of a few hours' operation, the entire charge will pass through the drier many times, Wallace indicates.

"The by-pass can be branched off from the main line either by fittings or by inserting into the line and silver soldering," he explains.

Hand valves are installed in the by-pass before and after the drier. These are necessary to permit easy changing of the drier or cartridge as required and to control the flow if needed, it is pointed out.

Gibson, Richards, Peterson Win Promotions at Parker

DETROIT — R. W. Englehart, president of Parker Rust Proof Co., has announced the promotion of Dr. R. C. Gibson to assistant vice president, working under F. J. DeWitt, vice president.

Announcement was also made of the promotion of E. W. Richards, formerly service manager, to the post of technical director. R. I. Peterson, formerly assistant service manager, moves up to the post of service manager.

Marlo Representative Opens 2 New Offices

ST. LOUIS—Marlo Coil Co. has announced that its southern representative, Engineering Sales Co. of New Orleans, has opened two new offices in the Louisiana and Mississippi areas.

Gus Pailet will head the office in Baton Rouge, La., serving southwest and central Louisiana.

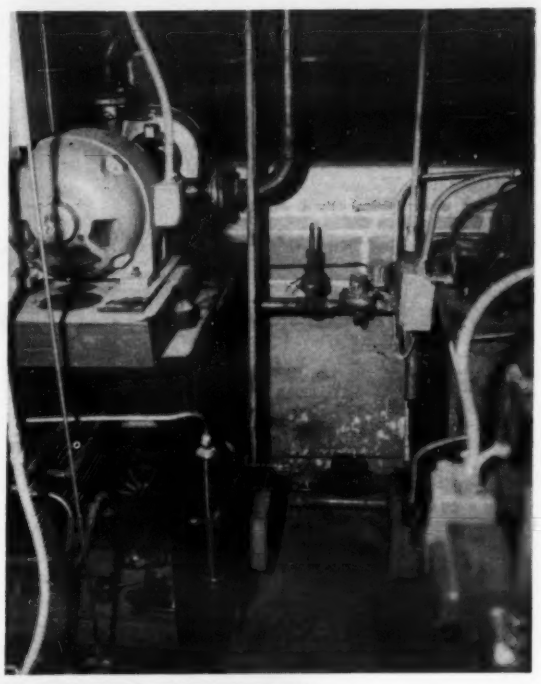
William V. Potts will head the new office in Mississippi, covering the area to Greenville-Greenwood-Columbus, Miss. from Jackson.

A graduate of engineering from Louisiana State university, Pailet is a member of ASHVE, and holds a reserve commission of captain with the U. S. Army Engineers. His background includes extensive experience in estimating, contracting, and construction in the air conditioning and heating fields in southern Louisiana.

Potts is a refrigeration engineer with a background of 15 years' experience in installation, service, and engineering design in air conditioning and refrigeration throughout the south.

Charlotte Firm Chartered

CHARLOTTE, N. C. — Ragan Refrigeration Co., Inc. has been granted charter of incorporation listing capital stock of $100,000. Incorporators: Sarah W. Abernethy, J. Carlton Fleming, and W. Pinkney Herbert, Jr.



WHEN WATER PUMP (at upper left) kicks out for any reason, solenoid valve (center) immediately brings in city water to cool compressors at Eisner's Super Market in Springfield, Ill. Shut-off valve at bottom center prevents water from backing up into pump. A thermostatic control also brings in city water, when the water in the closed circuit becomes too hot.

WHEN CITY WATER IS FLOWING through the cooling circuit, a 4-in. drain pipe in the cooling tower on the roof carries off the excess water. This pipe drops down the rear wall of the building right at the loading dock. Stockboys working there will hear the water coming down the drain. They notify the manager, who, realizing that this is a signal that something is wrong, calls for refrigeration service.

Now Available for the First Time!

Dependable Kelvinator Sealed Compressors

Model DK352C ⅓ H. P. Capacitor Start

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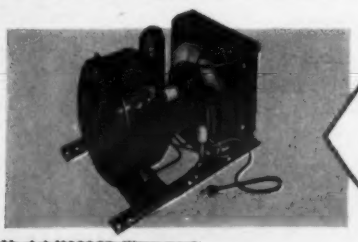
★ Competitively Priced

For the first time you can get Kelvinator quality compressors individually packaged, for the replacement jobs. Now increase your service business, get more new business. Yes, Kelvinator replacement compressors help level the payroll load in slack times, open up new and profitable accounts, pre-sell more Kelvinator new equipment orders.

Single Cylinder Internally Mounted Sealed Compressors. 10 models ⅛ H. P. through ½ H. P. Split Phase—Low Starting Torque Motors and Capacitor Start—High Starting Torque Motors all furnished with "plug-in" combination magnetic start relays with thermal overload protection. Wiring, mounting brackets, and capacitors furnished with capacitor models.



Model K352CR illustrated.
¼ H. P. Capacitor Start Sealed Unit

There are Kelvinator Condensing Units For Every Commercial Refrigeration Application

Open-Type: air cooled, water cooled. Combination air & water cooled space-saving truck units and Sealed Condensing Units with a Five-Year Warranty

Model OW-75 illustrated.
¾ H. P. Water-cooled Condensing Unit

A complete line of internally mounted, hermetically sealed units with an unequalled record of dependability. ⅛ to ½ H. P. for a wide range of self-contained or remote applications.

Complete line of open-type, air-cooled, water-cooled, truck and combination air and water cooled from ¼ H. P. air-cooled through 5 H. P. water-cooled.

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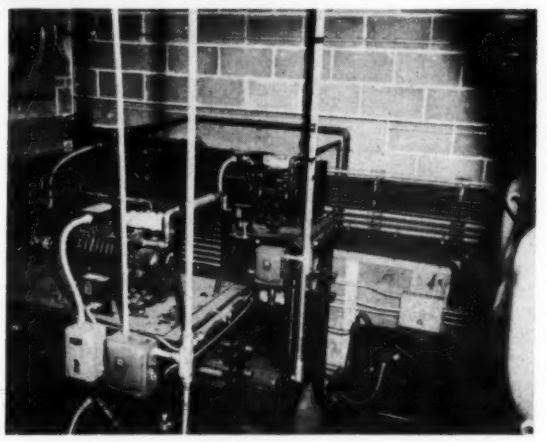

HUSSMANN DISTRIBUTOR Ray Pennington prides himself on his neat, workmanlike compressor room installations. This corner of the compressor room at Eisner's indicates the type of work that he does.

Year-Round Compressor Water Cooling System Uses Rooftop Cooling Tower

SPRINGFIELD, Ill. — A year-round water cooling system for refrigeration compressors using a rooftop cooling tower has been devised by Ray Pennington, Hussmann commercial refrigeration dealer here.

The system is installed at the Eisner No. 3 supermarket at W. Jefferson and MacArthur Highway here.

Pennington said that his system is based on a "secret," which he did not care to divulge except to say that it involves proper water circulation, a controlled amount of circulation, and controlled circulation temperature.

With this system, he said, he has been able to operate the tower satisfactorily and without freeze-up when outside temperatures were -10 to -12° F., which is about as cold as it gets in Springfield.

Another feature is its almost "breakdown proof" operation.

The cooling system is controlled by two thermostats. One cuts off the cooling tower fan when the water temperature falls below 70° F. and keeps it off until the temperature rises above that figure.

Another thermostat cuts in the city water supply when the water temperature rises above 95° F. and keeps the city water flowing until the temperature drops below that point.

In addition, a solenoid valve in the water line cuts in the city water if for any reason the water pump should fail to operate, while a check valve closes to prevent the city water from backing into the pump.

In this case the city water continues to flow until the difficulty is corrected.

When city water is flowing continuously through the system, a 4-in. drain in the cooling tower draws off the overflow and carries it down to the sewer.

The drain pipe runs down the rear of the building right next to the loading dock, where stockboys are usually present during all hours the store is open.

The stockboys, Pennington said, have been instructed that if they hear water running down this drain, they are to inform the manager at once. When the manager confirms the report, he calls Pennington, as that is a sure warning that someting is wrong. Pennington's serviceman then comes to the store and fixes the trouble.

Pennington commented that the system has worked very satisfactorily and he is planning to use it on other similar installations.

HOUSEHOLD REFRIGERATION

Lawrence Is Kelvinator Eastern Sales Manager; Harper, Mulkey Move Up

DETROIT—A. S. Lawrence has been named eastern regional sales manager for the Kelvinator Div. of American Motors Corp.

D. A. Packard, general sales manager, said Lawrence replaces R. A. Demmer who recently was named manager of district manager training.

A. S. Lawrence

K. C. Mulkey

Max Harper, Jr.

Lawrence formerly was Kelvinator zone manager in Kansas City, Mo. His successor there is K. C. Mulkey, former Houston branch manager, Packard said.

Max Harper, Jr., for the last two years a regional sales representative in the southwest, has been appointed branch manager at Houston.

Lawrence joined the Kelvinator organization in 1940 as electric range and water heater sales manager of the New York zone. He was transferred to the company's headquarters in Detroit in 1944 as assistant sales manager of the range and water heater division and was named manager of the division a year later.

In succession he was appointed manager of the Kelvinator major markets division, Minneapolis zone manager, and finally Kansas City zone manager.

Mulkey went with Kelvinator's Dallas zone as a district manager in 1939 after 14 years in the appliance business. In 1945 he became zone household sales manager and since 1949 had been branch manager in Houston.

Harper joined Kelvinator in 1947 as a district manager in Dallas. For two years he was a southwest regional sales representative.

All Appliance Sales Drop In West Penn Power Area

PITTSBURGH — All major appliances sold in smaller numbers during August than in the same month of 1953 in the southwestern Pennsylvania territory served by the West Penn Power Co.

Freezer sales held up the best, utility figures indicate, with a drop of only 4%. Automatic washer sales were down 10%, room coolers 11%, ironers 14%, clothes dryers 15%, refrigerators 19%, garbage disposers 25%, conventional washers 29%, ranges 31%, water heaters 38%, and dishwashers 64%.

Among the large dollar volume producers, only clothes dryers and automatic washers showed gains for the first eight months of the year as compared with the same period in 1953. Dryer sales were up 13.3%, and automatic washer sales up 5.7%, the utility said.

Freezer sales for the eight months dropped off 5.2%, refrigerators 15.8%, water heaters 18.6%, ranges 19.1%, and conventional washers 19.7%.

August unit sales as compared with last year were as follows:

Appliance	Aug. 1953	Aug. 1954
Refrigerators	1,807	1,464
Freezers	541	523
Room Coolers	96	89
Dehumidifiers	....	19
Ranges	913	638
Garbage Disposers	36	27
Dishwashers	50	18
Clothes Dryers	478	407
Ironers	91	79
Automatic Washers	634	576
Conventional Washers	1,391	989
Water Heaters	490	303

Rinse-Away Agrees To Modify Advertising Claims, FTC Reveals

WASHINGTON, D. C. — Rinse-Away Corp. of America, Huntington Park, Calif., and its officers entered into an agreement with the Federal Trade Commission to modify its advertising claims for the Rinse-Away electric garbage disposer, according to the commission.

The agreement provides for discontinuance of representations that the corporation manufactures the product; that the product provides the only complete electric garbage disposal service available; that it is the only disposal with an automatic reversible motor, thermo cut-off switch, reset button, or Allen wrench; that it is the only garbage disposal having a motor designed solely for use in garbage disposals; that it is the only garbage disposal which uses "Studite" as an alloy; and that installation of the product is always performed by factory trained personnel.

In addition, the firm agrees to discontinue claims contrary to fact concerning the number of cities which prohibit the use of garbage cans. It will also stop representing that purchasers of the product have the opportunity of participating in the profit-sharing plan or that the sum of $600,000, or any other amount not in accordance with the facts, is to be distributed among purchasers.

Officers of the corporation joining the stipulation are Harry Drake, president, and Mark Christy, vice president.

Approval of the stipulation is in accordance with the commission's policy of encouraging law observance through cooperation in certain types of cases where there has been no intent to defraud or mislead.

Attention-Getting Contest

Chicago Tribune Gives 20 Refrigerators In 20 Days

CHICAGO—The *Chicago Tribune* is currently giving away a refrigerator a day for 20 consecutive days. The contest will end Nov. 5.

No purchase is required of entrants. They must fill in a refrigerator contest coupon published in the *Tribune* completing the sentence "I would like to have a latest model new refrigerator in my kitchen because . . ." in 25 words or less.

Manufacturers, distributors, and retailers of refrigerators are cooperating with the *Tribune* to focus widespread public attention on the new developments in the models now available, the *Tribune* announcement explained.

Contest winners have their choice of any standard model of 13 different makes up to and including 11 cu. ft. The 13 makes from which they can choose are Admiral, Carson House, Coldspot, Crosley, Frigidaire, General Electric, Hotpoint, International Harvester, Kelvinator, Norge, Philco, Servel, and Westinghouse.

Each day's winner is selected from entries received in the *Tribune* office not later than 5 p.m. five days before the date of the issue of the *Chicago Tribune* in which the winner's name is to be announced.

Miller, Wicks Appointed To New Posts by NEMA

NEW YORK CITY—Joseph F. Miller has been appointed assistant managing director of the National Electrical Manufacturers Association, J. H. Jewell, president of NEMA, announced recently.

Norman Wicks has been named manager of the Business Development Dept., succeeding O. C. Small, who will become consultant to that department, it was also announced.

Before coming to NEMA in August, 1953, as recording secretary of the NEMA Wire and Cable Section, Miller had been serving as director of the Copper Div., Metals and Minerals Bureau, of the National Production Authority, Department of Commerce.

Miller is a graduate of Princeton university and Harvard Law school. He was admitted to the New York State Bar in 1932, and immediately engaged in private law practice in New York City.

Wicks has been a member of the NEMA staff since May, 1948. He joined the Business Development Dept. as field representative for the National Adequate Wiring Program, and held this position for two and a half years.

From October, 1950, to December, 1952, he served as recording secretary for several NEMA sections. During this same period, he was appointed manager of the Defense Production Project, and, during the Korean War, worked with NEMA committees and sections on material control problems then being experienced by electrical manufacturers.

On Jan. 1, 1953, Wicks was appointed assistant to the managing director, the position he held until this new assignment.

G-E Introduces '55 Line to Distributors, Dealers at Appliance Park Meetings

LOUISVILLE, Ky.—First of a series of meetings to acquaint distributors and dealers with its 1955 line will be held at Appliance Park here during the last week of October by the major appliance division of General Electric Co.

The initial meeting will be for distributor principals. Discussions will be concerned with over-all plans and policies for next year.

Following this meeting, several G-E "troops" will begin cross-country tours to talk with distributors sales counselors and sales promotion managers. Each troop will include one representative of each of the major appliance division's four specialized divisions, according to C. W. Theleen, customer relations manager.

Each distributor then will hold dealer showings as he desires. Most dealers will see the line during mid-November, it is expected.

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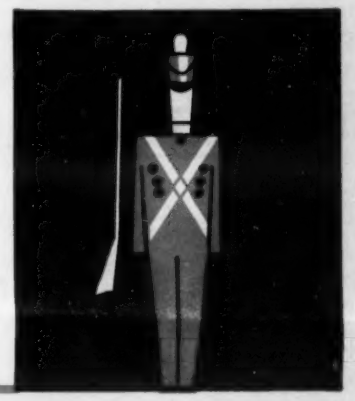

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122

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OCTOBER 25, 1954

From Ice to Riches

Our U. S. Government is storing an amazing assortment of perishable commodities in refrigerated warehouses these days . . . apples and auto batteries . . . butter and blood plasma . . . cellophane and chicken livers . . . beer-hops and horsemeat . . . turkeys and tulip bulbs . . . oats and crispy breakfast cereals.

Hence, the refrigerated warehouse industry has enlarged unbelievably thanks to the Farm Parity Support Program. Away back in 1865 the first real refrigerated warehouse in the United States opened for business. Located in New York City, this warehouse employed ice sawed out of lakes for food preservation. Much, much later (1940-45) mechanical refrigeration enabled warehousemen to produce their own ice.

Currently the cold storage industry really has "gone to town." It has expanded at a rate in excess of 7,000,000 cu. ft. a year. Public refrigerated warehouses number at least 800, and they have a combined capacity of some 450,000,000 cu. ft.

Many of these storehouses are impressively sizeable places. Our Jersey City Terminal embraces 4,000,000 cu. ft. of refrigerated space in an eight-story structure containing 27,000,000 cu. ft. of cold spots.

Presently modern refrigerated warehouses are single-story structures usually located away from downtown areas. Their one-story layouts eliminate elevators, and make possible a highly-mechanized operation. The outlying location provides ample parking facilities for trucks. Thus, many of the problems of the centrally-located, multiple-story warehouses are avoided.

Growth and progress of cold storage is impressive indeed, and so is the variety of frozen perishable commodities handled today.

If you could tour these warehouses, you would see such products as cheeses, candy, frozen egg yolks, fish, fruit concentrates, glue, ice cream, meats, mushrooms, flowers, onions, apples, oysters, pharmaceuticals, poultry, pre-cooked meat pies, and vegetables—just to mention a few of the more than 300 kinds of frozen delicacies provided by this booming business.

During holiday seasons you'd even find fresh flowers (by holding them at a steady 32°, flower blossoming is kept "in suspension"). And you could purchase long-stemmed American Beauty Roses in vacuum-sealed containers.

Careening through other cold-storage warehouses, you would observe that many are equipped with quick-freeze tunnels to accommodate customers who are without such facilities.

Incidentally, 80% of refrigerated warehouse space today is "freezer" space, and 20% is "cooler" space—just the reverse of the situation 30 years ago. This change was brought about, of course, by the tremendous growth of the frozen food industry—and the development of the home freezer.

Over the years, the cold-storage industry has advanced steadily.

How? By discovering new and better freezing, storage, and handling techniques. A great deal has been accomplished in the last 10 years, particularly, by means of a program promoted by The Refrigeration Research Foundation.

General aim of this non-profit organization, headed by H. C. "Dutch" Diehl, is "to advance the art of refrigerating commodities."

To this end, TRRF has awarded research grants totaling around $250,000 to universities and scientific groups.

His foundation is credited with an impressive list of accomplishments.

To date, it has come up with important findings on how the life of citrus fruit can be lengthened through cold storage, how to reduce "black spot" in shrimp, how to prevent "sugar bloom" in chocolate, and how to improve the popping qualities of popcorn.

Among other things, this research program also has brought about significant advances in the freezing of chicken and turkey.

Achievements thus far indicate that many new and improved methods of freezing will come out of that industry's constant search for better ways to serve its customers.

The aforementioned foundation now is busy with research on frozen milk—which it feels has great possibilities, particularly in ice cream and baked goods manufacturing. Also it's working on such promising items as frozen bread, salads, and berries.

They'll Do It Every Time . . . . . Jimmy Hatlo

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OLD TREMBY OUGHT TO WORRY HIS NIBS ONCE IN A WHILE AND GIVE HIM THE FROSTY STARE--
WATCHING THE OFFICE WORRY-WART REACT TO THE BOSS'S COLD SHOULDER--
THANK AND A TIP OF THE HATLO HAT TO "US" DES MOINES, IOWA
8-26
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Editor:

I would like to thank all the Refrigeration Companies for their kindness and assistance help in sending me catalogs, advertising material, and all the information they did give me. It was for my staying in the United States of a great help and I always shall remember this.

I have had the pleasure to stay in the United States for one year at the University of Buffalo. I did learn through all the information you did give me quite a lot. I did travel through the country, made a lot of friends and also did visit a few Companies and was surprised about their tremendous production. It will take us a long time in our country to come up to a top production as yours.

Thanks again to everybody for their assistance.

ERNST RIEL

1814 Graud Ave.
Dayton 7, Ohio

Editor:

Thank you for the book, "You'll Love This One." For sustained comedy I'd call the work super, super in its class. So unlike the Shopper's list of "Joke Books."

Best wishes for the continued success of the Business News Publishing Co.

THOS. P. MCMANN

Current Literature

To obtain further information on the literature listed below, please refer to key number preceding listing. Please use the "Information Center" form on "What's New" page.

How To Install Kitchen Shown In Consumer Booklet

——KEY NO. P-1040——

WARREN, Ohio—A new booklet that shows consumers how to install their own steel kitchens is being given to prospects by Youngstown kitchen dealers, the Mullins Mfg. Corp. announced recently.

The booklet, offered free to customers, is a 15-page manual of do's and don'ts, tips, and time-saving tricks on how to do a professional job. Each step is briefly explained and illustrated. For planning and decorating ideas, the manual refers customers to their dealers.

Role of Sales Finance Co. In Consumer Credit Told

——KEY NO. P-1041——

BALTIMORE—The third in a series of studies in consumer credit sponsored by the Commercial Credit Corp. was published recently, the company has announced.

Entitled "Financing the Instalment Purchases of the American Family, The Major Function of the Sales Finance Co.," the volume was written by Dr. Clyde William Phelps, chairman of the department of economics at the University of Southern California.

Dr. Phelps, said to be one of the leading authorities on finance and consumer credit, has authorized all three volumes in the series published to date. He undertook the research at the request of Commercial Credit Corp.

In this volume, Dr. Phelps said, attention has been directed to numerous aspects of financing which the consumer should understand and check on in assuring that he gets his money's worth when utilizing instalment credit in buying automobiles, appliances, and other goods.

Dr. Phelps added that attention is also centered mainly on the instalment buying of automobiles and on the services performed for consumer purchasers by the sales finance company. Comparisons are made with the alternative method of time buying represented by instalment loans offered by various types of lending institutions.

Sales finance companies, he pointed out, are primarily engaged in buying instalment contracts from dealers rather than in making direct loans to consumers.

The 104-page volume discusses types of instalment credit and financing institutions, reasonable financing charges, convenience in purchasing, credit advantages of instalment buying, insurance service, collection treatment, and consumer protection.

Electric Heating Units Described by Westinghouse

——KEY NO. P-1042——

PITTSBURGH—A 23-page, 4 by 9-in. booklet presenting complete data on heaters, thermostats, and snap switches for the users of industrial electrical units has been announced by Westinghouse Electric Corp.

In addition to complete tables listing wattage required, supply voltage, and dimensions, drawings give construction details and mounting instructions.

First sections of the handbook, B-6161, cover strip heaters, forced convection air heaters, room and oven heaters. The complete line of "Corox" heaters follows including immersion, bolt, finned, and special shaped units. Cartridge heaters, glue, and melting pots are included also.

Latter sections of the booklet are devoted to the selection of the correct heater for a specific application. Here, formulas and graphs are given and sample problems are solved.

Welding Stainless Steel Described In Folder

——KEY NO. P-1043——

BEAVER FALLS, Pa.—A folder on the welding of stainless tubular steel products has been issued recently by the Tubular Products Div. of the Babcock & Wilcox Co. here.

The folder, known as TDC 162, outlines the welding characteristics of both austenitic and ferritic grades of stainless steels and discusses the question of proper joint design.

In addition, it briefly describes various welding methods such as: fusion, metallic-arc, oxyacetylene, atomic-hydrogen, inert gas arc, and flash-butt. A table of recommended arc welding procedures is included which suggests electrodes, preheating, and post-welding heat treatment.

O. C. Keckley Publishes 40th Anniversary Catalog

——KEY NO. P-1044——

CHICAGO—O. C. Keckley Co., manufacturer of steam and liquid control equipment, has recently published Catalog No. 54, an edition commemorating the company's 40th anniversary.

The new catalog has been redesigned for easy reference. Tabular material has been simplified for quicker reading of specifications. Quick reference tables on pressures and temperatures, water heads and equivalent pressures, and flange data, as well as a pressure regulator capacity table have been included.

Products shown in the free catalog include pressure and temperature regulators, float valves, strainers, pop safety valves, relief valves, diaphragm valves, motor operated valves, and solenoid valves.

Herman Nelson Offers Paint and Linoleum Guide

——KEY NO. P-1045——

LOUISVILLE, Ky.—A new 4-page paint and linoleum color selection guide has been made available to architects and engineers by the Herman Nelson unit ventilator products department of the American Air Filter Co., Inc.

Designed primarily for persons interested in unit ventilators, auxiliary cabinets, and convectors for school classrooms, the 5-color brochure covers a wide range and selection of different colors.

Linoleum reproductions are in full color while the paint samples reflect a new lacquer transfer method.

Seven different colors and four combinations of colors are shown for Herman Nelson classroom equipment. The linoleum which is used on unit ventilators, cabinets, and convectors is shown in five different choices of styles.

Other features of the color and selection guide include suggestions for color combinations, and the reflectance factor for each color.

Government Tells How To Analyze Your Own Business

——KEY NO. P-1046——

WASHINGTON, D. C.—A free eight-page pamphlet on "How To Analyze Your Own Business" has been issued recently by the Small Business Administration here.

Called Management Aid No. 46, it gives a checklist of 45 areas of opportunity in three graduations (progressive, average, or weak) for a business manager to find the spots needing the most attention in the fields of general operation, production, distribution, and control.

Copies may be obtained from any SBA field office.

Catalog Covers Bowser's Environmental Equipment

——KEY NO. P-1047——

TERRYVILLE, Conn. — Bowser Technical Refrigeration here has issued a new 12-page catalog covering its complete line of environmental testing and processing equipment.

Contained are illustrations and specifications on the concern's recently-redesigned altitude, humidity, low temperature, and prefabricated test chambers as well as explosion chambers, sand and dust chambers, cloud and pour units, and other specialized testing equipment.

Helpful engineering data is included.

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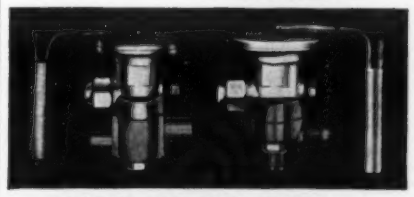

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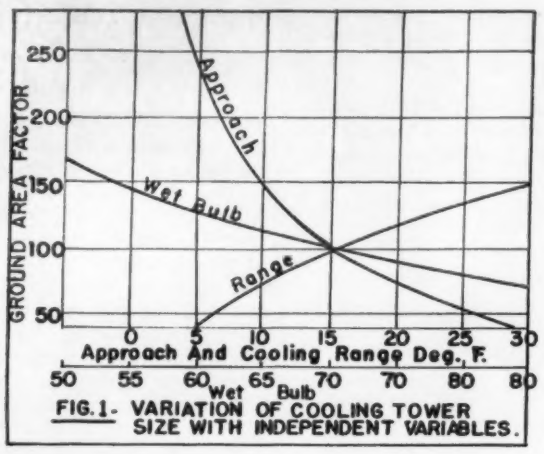

FIG. 1- VARIATION OF COOLING TOWER SIZE WITH INDEPENDENT VARIABLES.

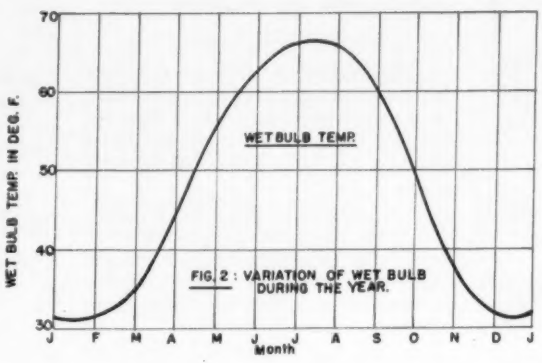

FIG. 2 : VARIATION OF WET BULB DURING THE YEAR.

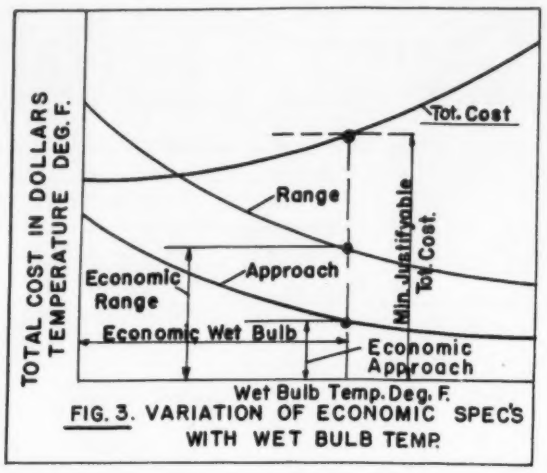

FIG. 3. VARIATION OF ECONOMIC SPEC'S WITH WET BULB TEMP.

COOLING TOWER DESIGN, APPLICATION

Selecting Equipment Which Meets Customer, Engineering Requirements

WICHITA, Kan.—Many factors that go into cooling tower design and application were discussed before the sixth annual conference of the Mid-West RSES association here by O. L. Michael of Santa Fe Tank & Tower Co., Inc.

"The selection of one piece of equipment affects all the others so that the number of possible combinations becomes very large. In the case of the cooling tower it works as a part of a whole circulating water system.

"The function is to receive a quantity of circulating water which has been heated somewhere else in the system, to cool this water down over a specified range with the cooling medium supplied by the atmosphere so that it can be returned to the heat source to repeat the cycle," Michael explained.

"The first part of a set of cooling tower specifications is to state precisely how much circulating water is to be cooled, what temperature of cooling medium is available, and how close to the temperature of the cooling medium is the circulating water to be cooled.

"Everyone of those statements can be varied and in so doing, the first cost and the power requirements of the cooling tower change, but the first cost, the power requirements, and the performance of the other equipment in the cycle change equally.

"Which of the infinite variety of possible combinations is the one to choose? This is the first problem that must be solved in writing a set of cooling tower specifications, the fixing of the performance specifications.

"This done, the next question arises. What type of cooling tower shall one select capable of fulfilling the performance specifications? What design, what materials shall one specify in order to obtain a tower of long life and reliable operation?

"If the first problem was entirely the concern of the user, the second problem involves the cooling tower manufacturer equally. The set of performance specifications submitted to him permits the selection of an infinite variety of cooling towers all equally capable of fulfilling the duties specified. He may select a tower of lowest first cost and large power requirements, or he can go all the way in the opposite direction. What is the principle which determines the right choice?

Right Selection Is Economic Selection

"The answer, of course, is the well-known engineering principle which states that of all possible selections the right selection is the economic selection. By definition the economic selection is the one in which the sum total of all costs of all elements affecting each other in a system is a minimum," he said.

"Whether the final solution has been arrived at by precise methods or by more or less guesswork, it is supposed to represent the solution of minimum total cost.

"Now this total cost is made up of two entirely different items. One item represents capital costs, that is actual cash outlay necessary to purchase real estate, equipment, and auxiliaries that make up the total installation. The other item is represented by yearly expenditures for power, maintenance, etc., necessary to keep the equipment in operation.

"In the employment of cooling towers the final object is always the rejection of heat from a heat source into the atmosphere. This object could be accomplished with other types of equipment by direct heat transfer between the heat source and the atmosphere. With cooling towers, however, the rejection is indirect, with water interposed as a heat transfer medium.

Twofold Advantage of Water

"The advantage thus obtained is twofold. The physical characteristics of water as a heat transfer medium are far superior to those of air; its higher specific heat, its larger heat transfer coefficients at the heat source result in the need for considerably small heat transfer surfaces and therefore, large savings in the first cost of the equiment. But equally or possibly more important is the additional heat transfer source gained when water is brought into direct contact with air, as is the case in the cooling tower," Michael declared.

"The resulting cooling of the water by evaporation permits heat rejection into the atmosphere at the lowest temperature level possible, only limited by the wet-bulb temperature, whereas indirect heat exchange through metal walls, with conduction as the only heat transfer medium would only permit the rejection of heat at a temperature level close to the dry-bulb temperature.

"The heat load to be rejected into the atmosphere is determined by the process and is a fixed value. The heat load is the product of the circulating water flow expressed in pounds per hour and its temperature rise. It follows that the two cooling tower variables of Capacity and Range are not independent variables. The selection of one of them fixes the value of the other.

"Let us for the moment assume that by some considerations the wet-bulb temperature has been fixed. Then there is only one additional independent variable left which when fixed makes the performance specifications complete, and that is the 'approach' to the wet-bulb temperature.

"For a fixed heat load and wet-bulb temperature there are only two independent variables, the 'Range' and the 'Approach,' which when fixed determine the circulating water capacity, and its hot and cold water temperatures.

"Varying systematically Range and Approach will result in a series of installations of different total costs from which the combination of minimum total cost is selected. Every change of Range and Approach not only changes the size and power requirements of the required cooling tower, but also changes the size and power requirements of all equipment contained within the circulating water cycle.

Cooling Tower Variables

"The degree of change of the cooling tower size with the independent variables depends on the wet-bulb temperature, but the character of the change is the same for all temperatures and is shown in Fig. 1.

"Here a cooling tower for a fixed circulating water flow is assumed to be designed for a 15° F. cooling range and 15° F. approach to a 70° F. wet-bulb temperature. If all other factors remain the same, reducing the approach to 6.3° F. will double the size of the tower, and decreasing the range to 6.1° F. would permit the use of a tower half as large, that is if the water flow has not been changed. But if the heat load is fixed and the range is decreased from 15° to 6.1° F., the circulating water flow would have to be increased in the ratio $\frac{(15)}{(6.1)}$. Since the tower is proportional to the water capacity, the change in size will actually be $0.5 \times \frac{(15)}{(6.1)} = 1.23$, or 23% larger.

"In cooling tower work tower sizes are always smaller if the heat load is distributed on a small water capacity and a large rise. Finally, leaving all original factors the same and changing the wet-bulb temperature from 70° F. to 53.7° F. would require a tower 1½ times as large," Michael explained.

"Corresponding changes in the opposite direction would take place as far as the other equipment of the cycle is concerned and the degree of these changes depends on the process in question.

(Continued on next page)

It's "the big move" in Packaged Air Conditioners!

G-E DEALERS BURN UP THE ROAD TO BIGGER YEAR-AROUND PROFITS

ARE YOU USING THESE TO ACCELERATE SALES?

General Electric's share of the market doubles in two years ...thanks to aggressive dealer selling! In the competitive packaged air conditioner market, G-E dealers not only move faster... they maintain a more even sales pace throughout the year. They get bigger profits *every* month with a minimum of the selling peaks and valleys formerly associated with this industry.

That's because G.E. promotes sales every month of the year! Aggressive dealers know this means better business for them, and tie-in with G-E sales helps. With a superior product and strong promotion, G-E dealers edge out competition, roll up bigger profits.

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Any company is only as good as the dealers who represent it... a fact G.E. never forgets! Just look over the exclusive G-E advantages at the right. No other manufacturer offers its dealers as much to work with! Teamwork like this is the backbone of G-E success in America's fastest growing industry.

Progress Is Our Most Important Product

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G.E. LEADS ***with Saleability!*** Sealed-in cooling unit, muggy weather control, directional airflow, winter heating and dozens of other engineering features.

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Packaged AIR CONDITIONERS

Cooling Tower Design, Application--

(Continued from preceding page)

"The temperature level at which heat from a process can be rejected into the atmosphere depends on the prevailing wet-bulb temperature, and the wet-bulb temperature never prevails for very long. It is in continuous fluctuation during the day and during every day of the year.

"Fig. 2, for example, shows a typical wet-bulb temperature variation over the year. Such curves can be plotted for every specific location from data obtainable from the nearest Weather Bureau or the nearest airport.

Which Wet-Bulb Temperature?

"The question now arises on which wet-bulb temperature shall the economic performance specifications be based? In other words, what is the economic wet-bulb temperature?

"Obviously, if the maximum wet-bulb temperature were to be selected and in order to obtain a reasonably low cold water temperature, the approach would have to be made low. It is questionable whether in the short period of time at which such maximum temperatures prevail the savings in plant operation would balance the larger initial cost of the tower. On the other extreme, the approach would be made large and the tower small, but the savings in the initial cost of the tower might not balance the losses in the plant.

"It is obviously the duration of these temperatures during the year that determines the economics of the installation.

"The economic performance specifications of Range and Approach and the minimum total cost of the installation can be determined for any fixed wet-bulb temperature. In other words, the minimum total cost and the economic specifications can be plotted against wet-bulb temperature as shown in Fig. 3.

"If the curve of temperature variation during the hour is subdivided into a suitable number of zones of average constant temperature and of known duration and the corresponding minimum costs adjusted to their duration and added, one obtains the weighted average minimum total cost that is economically justifiable to be allotted to the particular installation.

"This sum entered into the minimum total cost curve of Fig. 3 then fixes the economic wet-bulb temperature and its corresponding economic Range and Approach. The economic problem is now completely solved.

Cooling Tower Location

"It is the cold water temperature supplied by the cooling tower to the plant which determines plant efficiency and plant economy. And this cold water temperature follows from the selected approach to the wet-bulb temperature. It is, therefore, necessary to examine closely on which wet-bulb temperature the cold water temperature is based.

"In Fig. 2 the variation of wet-bulb temperature for a location is shown and stated that this data may be obtained from the Weather Bureau or the nearest airport. Now these temperatures could be called the 'natural ambient wet-bulb temperatures,' existing at the location, if the location is free of any structures.

"But as soon as a plant is built at the location, the process of which requires various discharges of heat or steam into the atmosphere, as soon as buildings and obstructions hinder the natural flow of air at the location, the wet-bulb temperature at this location will be affected and that means raised.

"If a cooling tower is erected in that location, it is this raised wet-bulb temperature which is the true 'ambient wet-bulb temperature.' No data is available giving the difference between natural and ambient wet-bulb temperatures of a location. It will depend, of course, on the type of plant and on the nature of the location. It usually is probably rather small.

"As far as the cooling tower proper is concerned its performance is purely dependent upon the wet-bulb temperature of the cooling air entering it. And so a third wet-bulb temperature must be distinguished, the 'inlet wet-bulb temperature.'

"Needless to say that a precise set of specifications must clearly state on which of the wet-bulb temperatures the cold water temperature should be based. That the inlet wet-bulb temperature can be quite different, much higher than the ambient wet-bulb temperature is due to the phenomena of recirculation.

Recirculation

"Recirculation on a cooling tower can be defined as the adulteration of the ambient air entering the tower by a portion of the exhaust air leaving the tower and essentially caused by the presence of the tower itself within the surroundings.

"The effect of recirculation on the tower performance can be quite severe and small degrees of recirculation can nullify a good part of the capital invested in the cooling tower, or if taken into account, may require a larger tower for the specified cold water temperature.

"In fact, there is a critical degree of recirculation where no increase in size is sufficient to obtain the desired cold water temperature, and since it is the cold water temperature which governs the economics of the whole plant, the question must be answered on what wet-bulb temperature should it be based in the economic calculations.

Design Factors

"The cooling tower is a heat exchanger and its purpose is to bring atmospheric air and water in intimate direct contact over a large surface so that heat exchange by conduction and heat exchange by vapor diffusion may take place at the desired rate. In cooling towers the extended surface is provided by the water either by letting it flow over material surfaces in thin films (film tower), or by subdividing the water into small drops (spray tower), or by a combination of both.

"The usual tower is that combination. Now, when the tower is in operation at a steady rate, the drop surface will be determined by the total number of drops within the tower and by their respective dimensions. It is obvious that the total number of drops within the tower will be the larger the longer it takes a drop to fall through the tower, since the rate at which drops enter the tower is constant. And in order to increase the time of fall it is necessary to prevent the drops from falling through the tower without interruption.

'Fill' Halts Drops

"It is for this reason that the 'fill' is introduced. The purpose of the fill is to halt the drops in their fall at fixed intervals in order to increase their total time of fall. But by introducing fill made of material surfaces over which the water impinges, and over which it forms thin films, the additional film surface is added.

"Essentially then, a cooling tower consists of a confined space enclosed by a shell within which a number of decks of fill are supported, and to which the circulating water is brought and discharged into a water distribution system which divides the water into drops and distributes them evenly over the whole tower area. By either natural or mechanical means the cooling atmospheric air is drawn into the cooling tower space where it is evenly distributed over the whole tower area, and brought into intimate contact with the water surface.

"A first distinguishing mark of cooling tower types is the path of the air flow in relation to the falling water. The air can be made to cross it at 90° angle or to flow in the same direction in countercurrent to the falling water. This determines the two prevelant cooling tower types on the market:

"1. The Counterflow Tower.

"2. The Crossflow Tower.

"Heat exchange theory states that the more efficient principle of the two is the principle of counterflow which will require less surface for the same cooling. However, engineering is not physical theory but economic application. If the disadvantages of the crossflow principle can be offset by advantages somewhere else, the result will be quite satisfactory from an economic standpoint.

"As far as the design of the elements and their successful arrangement is concerned, both types of towers follow the same principles.

"It is the task of the structure to transmit all loads, weight loads and wind loads to the foundation without exceeding in any part the allowable stresses. An economic structure will accomplish this result with a minimum of material. To the cooling tower structure, however, must be added an additional requirement usually absent in other structures, namely, that the task must be accomplished in such manner as not to interfere with the performance of the tower, not to disturb the flow of air and the fall of water through the tower.

Function of Sheathing

"The sheathing encloses the space within which heat exchange between air and water takes place. Its function is to keep this space isolated so that air from the outside cannot penetrate and by-pass the provided air entrance area and water from the inside cannot leak into the outside.

"A single sheathing wall would fulfill this purpose quite satisfactorily. But single sheathing walls will show wet patches which make the tower look unsightly. It is for this reason the usual specifications call for double sheathing.

"Experience has shown that the space between the two walls in double sheathing is the breeding ground of microbiological wood-destroying organisms, fungi, and bacteria, if not thoroughly aerated. The aerated double sheathing now more and more employed in cooling towers insures perfect aeration, preserves the aesthetic appearance of the tower outside, and, incidentally, saves in lumber.

(To Be Continued)

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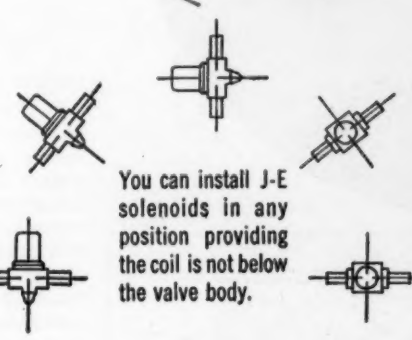
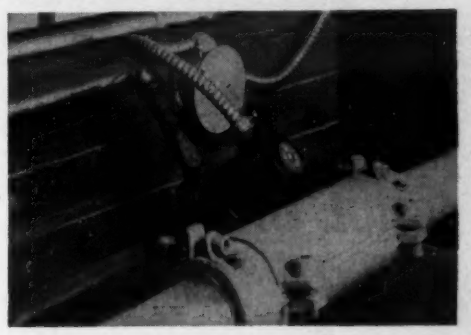
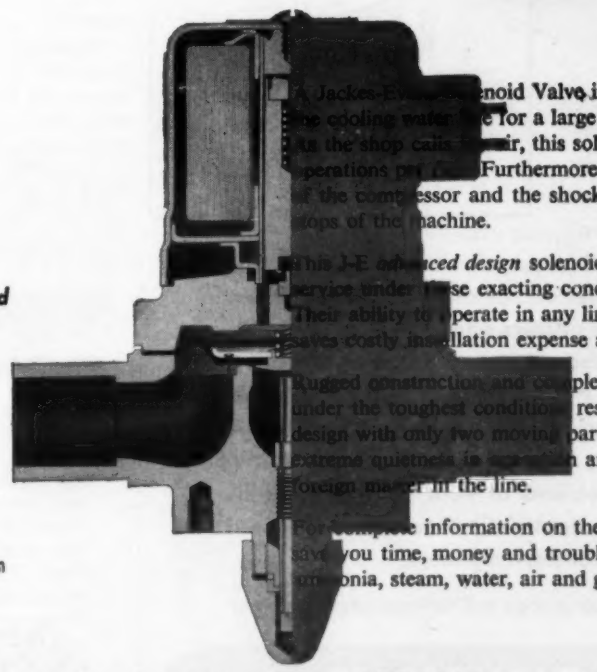


You can install J-E solenoids in any position providing the coil is not below the valve body.

Installed at 45° Angle J-E Solenoid Has Given Over 2 Years of Trouble-Free Service at Heitz Machine & Tool Co., St. Louis





A Jackes-Evans Solenoid Valve installed at a 45° angle controls the cooling water line for a large air compressor in this installation. As the shop calls it—air, this solenoid makes hundreds of operations per day. Furthermore the valve is subjected to vibration of the compressor and the shocks of sudden starts and stops of the machine.

This J-E *advanced design* solenoid has given completely satisfactory service under these exacting conditions for over two years. Their ability to operate in any line regardless of position often saves costly installation expense and line relocations.

Rugged construction and completely dependable performance under the toughest conditions result from the amazingly simple design with only two moving parts. These advantages also assure extreme quietness in operation and eliminate clogging due to foreign matter in the line.

For complete information on the many ways J-E solenoids can save you time, money and trouble in controlling Freon, brine, ammonia, steam, water, air and gas, call your wholesaler or write:

All J-E Solenoids are unconditionally guaranteed for 18 months

- **TIGHT SEATING**—no bubble tolerance.
- **SIMPLICITY**—only two moving parts.
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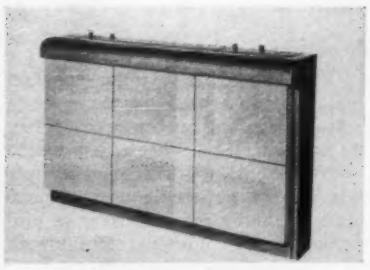
XUM

What's New

When requesting further information on new products, please use "Information Center" form.

Year-Round Conditioner Has 'Simple, One-Pipe System'



——KEY NO. D-1040——

FOREST HILLS, L. I., N. Y.—A new all-liquid year-round air conditioning package for homes that provides heating and cooling "in a simple, one-pipe system" has been introduced by Brown Products Co. here.

"In the room," the company explained, "is the Brown air conditioner — a heating-cooling room unit. It is fully factory-assembled and requires only simple piping and electrical connections.

"The air is cleaned by filters and discharged into the room by two-speed blowers after passing over coils through which hot water circulates during the winter and chilled water during the summer. The room units are installed on a one-pipe system almost identical with the usual monoflow forced hot-water system."

A conventional heating boiler is used during the winter.

An air-cooled water chiller, shipped as a factory sealed unit with only piping and electrical connections required on the job, is located in the boiler room for summer cooling. It comes in 2 and 3-hp. capacities, with two 1-hp. compressors in the 2-hp. size and three 1-hp. compressors in the larger size. This permits automatic step operation at partial loads, the company pointed out.

"The Brown air conditioner has an extremely low pressure drop for water flow," the company said. "Thus it can be installed on a monoflow system using a circulator similar to that in residential wet heating systems rather than the special high velocity pump required in some systems.

"During the cooling cycle a circulator operates continuously. The blowers in the room units operate at high speed until the controlling room thermostat is satisfied. Then they automatically switch to low speed. When the blower is operating at low speed, the air passes more slowly over the coils, thus increasing dehumidification of the air.

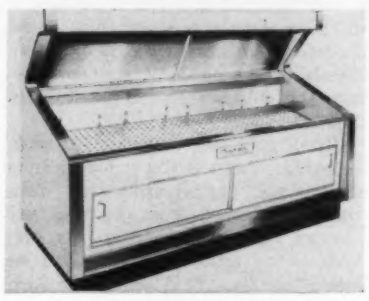
"As the cooling cycle starts, only one of the 1-hp. compressors in the chiller operates. The other compressors are not used unless return water temperature, as measured by a thermostat bulb in the return line, rises above factory pre-set value. Then the other compressors cut in to provide additional cooling.

"On very hot and humid days when the system may become overloaded, a limit switch in the return line cuts to low speed the blowers in all the room units operating at that time, instead of shutting off the system completely. This will reduce the load and also allow for greater dehumidification and a certain amount of sensible cooling."

For the heating cycle, it was explained, each unit is equipped with a reactor coil which permits six different speed settings for low speed, thus controlling heat output from the unit at a pre-set water temperature in the system.

"The operation of the system is similar to a conventional forced hot water system, the circulator and blowers operating intermittently when the thermostat calls for heat," the company said. "On the heating cycle blowers operate at low speed."

Open Produce Sales-Case Contains No Glass



——KEY NO. D-1042——

NILES, Mich.—A new open produce sales-case, designed for easier loading, lower maintenance, and faster self-service sales, has been introduced by Tyler Refrigeration Corp. here.

As with other models in the Tyler sales-case line, the newly-designed produce sales-case contains no glass. According to the manufacturer, improved refrigeration techniques permit removal of the "standard" front glass, and the consequent lowering of the sales front, from 42 in. to 36 in.—natural bending height for the average woman shopper.

Result: the shopper sees more merchandise sooner and reaches it easier and faster, thus speeding up self-service sales, the company says. Improved accessibility also benefits the clerk who loads the case.

The new open produce sales-cases are available for top display, only—or for double duty, with front loading storage-compartment, serviced by sliding doors on an aluminum trackway.

Sales-cases come as single units, or for continuous installation. Display areas are 8 or 12 ft. long, with 3¼ in. added for each case end. Superstructures, with fixed, sloping mirrors, are furnished as separate accessories and may be added later if not originally specified. Outstanding features include: exclusive, one-piece welded steel shell; Tyler automatic defrost system, covering evaporator and all air passages; drainage system, with large brass drain and odor eliminating drainage trap; display shelves, adjustable to three positions; easy access to all drainage, electrical, and refrigerant outlets; protective cart bumper rail; and porcelain front with stainless steel trim.

Optional equipment includes hose and water spray attachment, with coil for cooling water. Special sack rack cut into case front is also available on order.

Complete information and illustrated literature is available on the new case.

Entire Vacuum Cleaner Revolves on Swivel Base

——KEY NO. D-1043——

MANSFIELD, Ohio — A new canister vacuum cleaner with "Merry-Go-Round" swivel base on which the entire unit revolves and not just the top, was introduced recently by the Westinghouse Electric Appliance Div.

The swivel base also provides convenient cord storage. For use, the cord unreels from around the base of the cleaner by simply pulling it out to the length needed to reach the electric outlet. To store the cord, just spin the top and the cord winds up on the "Whirl-Away" cord reel.

A light weight vinyl hose is ribbed to withstand rugged treatment. Light weight anodized aluminum extension tubes are adjustable to the height of the user. The tubes extend, much like a telescope, to the desired length and then lock securely in place to rid the homemaker of bending and stooping during the cleaning job. The tip-toe starting button further reduces the need for stooping.

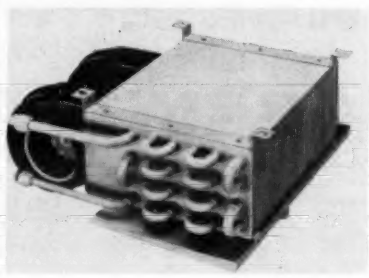
The canister, model DC-7, has a 675-watt Westinghouse motor which operates a three-stage turbine. To protect the motor from fine dust a filter is located between the Toss-Away bag and the motor.

Attachments include a rug nozzle, dusting brush, upholstery nozzle, a crevice nozzle, moth crystals, and additional Toss-Away bags.

Located directly below the suction opening for the hose is the opening in which the hose can be inserted for spraying or demothing. It is also very handy for inflating children's toys or wading pools. Both openings have the self-locking hose feature which makes positive connection to prevent air seepage and loss of suction.

The new model DC-7 canister cleaner is now available nationally carrying a list price of $99.95.

Evaporator for Fractional Hp. Compressor Jobs



——KEY NO. D-1041——

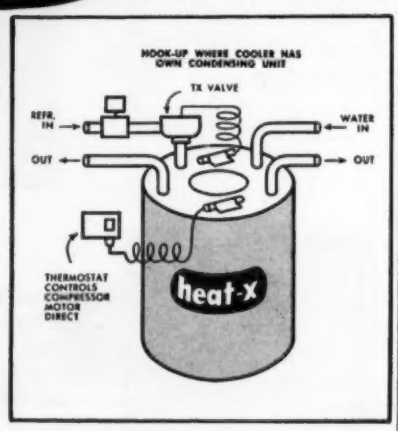
CHICAGO—An evaporator of compact design for fractional horsepower compressor jobs, called the "Twin Chiller," has been introduced by Rempe Co. here.

It is recommended for use on all cooler jobs for holding temperatures from 34° to 50° F. with lowest suction gas 24°—such as beverage coolers, delicatessen reach-in coolers, pharmaceutical refrigerators, backbar coolers, hospital refrigerators, laboratory reach-in coolers, candy display cases, hotel lobby show cases, and florist display cases.

Available 4 or 6 tubes wide, it is built for use with "Freon-12" or "Freon-22." For ammonia coils are steel hot galvanized.

Standard construction: ⅝-in. diameter copper tubing; collared aluminum fins—4 per inch; removable drain pan with ¾-in. condensate drain; ceiling mounting brackets; double blower—275 c.f.m. air; built-in plenum; ½-hp. motor, 110-volt, a.c., 60 cycle; ½-in. flare inlet—⅝-in. flare outlet.

OFFICIAL U.S. NAVY PHOTOGRAPH



COOL DRINKING WATER UNDER THE SEA

There's plenty of it for men aboard the U.S. Navy's new and re-conditioned submarines.

Typical is the "Diodon" shown above. Aboard this sub, a Heat-X cast aluminum water cooler chills ample quantities of drinking water to supply officers and crewmen. The unit, connected into the ship's refrigeration circuit, has a cooling capacity of 15 gallons per hour. The cooler is installed in an insulated housing and is equipped with suitable Navy-type controls.

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THE HEAT-X-CHANGER CO., Inc.
BREWSTER - NEW YORK

"Complete line, the perfect set-up for every need," says Clyde L. Copp (left), Typhoon dealer in Tulsa, shown with one of his customers.

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- ROOM AIR CONDITIONERS, ½, ½, ¾, 1 H.P.
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For "easy-to-get" product information . . .
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WORLD'S LARGEST MANUFACTURER OF REFRIGERATION CONTROLS

What's New (Con't)

Tenney Announces Table Model, Low Temp Test Chamber

——KEY NO. D-1044——

UNION, N. J. — Tenney Engineering, Inc. here has announced what it claims is the first self-contained, table model, low temperature test chamber.

Measuring only 29½ in. high by 57 in. long by 30½ in. wide, and weighing but 450 lbs., this table model produces temperatures to -100° F. and will dissipate 1,000 B.t.u. per hour at -80° F., according to the company. It also produces temperatures to 212° F.

"To produce the extremely low temperatures required, and at the same time include all operating equipment within the small over-all dimensions, the cascade system is used," Tenney explained.

"If the cascade system was not used, a three-stage compound system would be required and this would necessitate larger as well as additional compressor which could not go into present dimensions.

"The cascade system actually embodies two interlinked refrigeration circuits, the evaporator of one being the cooling element of the condenser of the second. 'F-22' is used in the first stage and 'F-13' in the second.

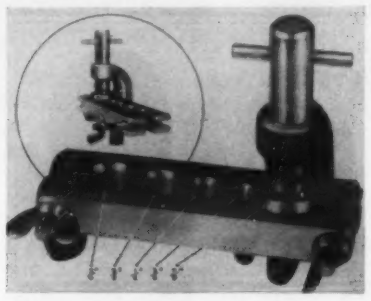
"In addition to space-saving economies, the cascade system also costs less to purchase and to operate, and is simpler to maintain.

"Another unusual feature of the chamber is the fact that the refrigeration tubing encircles the 1-ft. by 1-ft. work space instead of being arranged in a bank along one side as is customary.

"Heating is accomplished by non-glowing, low surface-temperature heaters located in the rear.

"A 2½-in. port enables leads to be brought into the chamber both for operating equipment and for connecting equipment on test to outside instruments.

"Automatic controls stop and start refrigeration and heating equipment to maintain set temperatures within ± 2°. A thermobulb located inside the chamber connects with an indicating instrument on the front so that actual temperatures may be checked."



Flare Is Made by Tapping Hardened Tool Head

——KEY NO. D-1045——

CLEVELAND — A new copper water tube flare tool for flaring ¼, ⅜, ½, and ¾-in. tubing was announced recently by Schaul Mfg. Co. here.

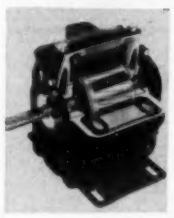
The tubing is inserted in the correct aperture and tightened by a permanently attached wing nut. The hardened tool head is tapped and the flare is made.

The "Supreme" flare tool is self-centering and self-seating. It lists for $12 and is available through wholesalers.

'Tri-Flux' Design Added To Sub-Fractional Motor

——KEY NO. D-1046——

OWOSSO, Mich.—Higher starting torque through a new "Tri-Flux" design is featured in its improved AY and BY model shaded pole motors, the Redmond Co., Inc. here announced recently.



The sub-fractional "Micro-Motors," which are rated from 1/15 to ⅛ hp., have been field tested for more than two years and are now in production, the company said.

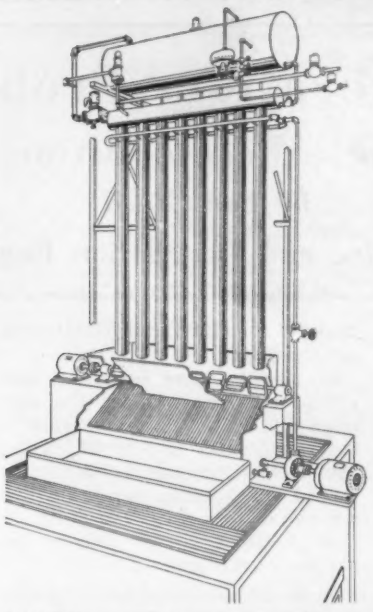
The Tri-Flux design, patented by Redmond, provides three flux paths: main pole flux path, flux path through the shaded part of the pole, and flux path through a reluctance recess cut into the leading edge of each salient pole.

The system, the company claims, develops a better wave form across the face of each pole which empirically develops higher starting torque and excellent pull up characteristics.

Another major advance in the design of Redmond MicroMotors is the "Uni-Cast" field. In this method of construction, laminations are stacked and die-cast together to form a rigid field structure which eliminates shifting of laminations during manufacture.

Results are reduced magnetic hum, positive alignment of concentric air gap and all components, all of which contribute to extreme low noise level in operations.

Other features include: Precision bored steel back babbitted bearings and positive lubrication from oversized oil reservoirs.



DRAWING illustrates improved method of making ice as developed by Frick Co.

Frick Improves Ice Making With 'Shell-ice' Method

——KEY NO. D-1047——

WAYNESBORO, Pa.—Frick Co. has announced an improved method of making ice with ammonia or "Freon" under direct expansion.

The product, known as "Shell-ice," is frozen in layers ⅓ to ½-in. thick on vertical tubes, and when thawed loose is broken into pieces of varying sizes.

"Installation is simplified because the ice maker is a built-up unit," the company said. "The operation is both simple and automatic, and the initial cost is low in comparison with other ice making systems. Dairies, poultrymen, fruit and vegetable packers, fishing boats, hotels, restaurants, and numerous other businesses use fragmented Shell-ice to advantage."

Shell-ice makers are built in 12 sizes, from ½ to 30 tons daily capacity, and are offered for sale in all countries.

Production of the units has already started in the Frick factory at Waynesboro. The equipment is described in Frick Bulletin No. 54.

"This development is made possible by a manufacturing and sales license under the patents applied for by M. S. Chapman of Wheeling, W. Va., who has over 30 installations in successful operation throughout the country," Frick said.

New Thermometer Gives Pipe, Tube Temperature

——KEY NO. D-1048——

LOS ANGELES—Pacific Transducer Corp. here recently announced new pipe surface thermometers to be used to obtain the temperature of pipes and tubes from ½ in. to 2 in. in size.

The thermometer is quickly fastened to the pipe by means of a spring clip without the use of any tools, according to the company.

"The spring is merely pushed over the pipe by hand and snaps into place," it was explained.

"The temperature sensitive element is a calibrated bimetal and is closely coupled thermo-dynamically to the pipe. The accuracy is plus or minus 2° over the entire range of the thermometer, which reaches stability within five minutes.

"It is not necessary to open any pipe joints to install this thermometer. The bimetal element is protected by a copper cup which is made to fit the pipe closely."

The thermometer comes in two ranges: One from -50° F. to 250° F., and the other from 70° F. to 370° F. The thermometer dial is 2 in. in diameter.

Price of the unit is $6.75 f.o.b. Los Angeles.

Information Center

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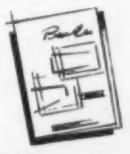

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Refrigeration Problems

and their solution

by Paul Reed

For Service and Installation Engineers

Paul Reed

Replacing the Motor-Compressor

The practice of exchanging motor-compressors on hermetic systems has become common practice in the field, even on units which, when built, were not designed to be serviced in the field and which consequently were not provided with service valves or fittings. Nevertheless, the manufacturers of some of those systems now approve and encourage the replacement of motor-compressors in the field.

To remove the old motor-compressor, it is usually necessary to cut the discharge and suction lines near the motor-compressor. In most cases, this can be done with an ordinary tube-cutter.

In some instances, there is so little room that it is very difficult to use a tube-cutter, or in other instances one or both of the lines are of steel tubing; so a hacksaw blade is sometimes used instead of a tube-cutter.

If this is done, extreme care should be used to keep the cuttings out of the line remaining in the refrigerator and to which the new motor-compressor will be attached. If possible, bend the line somewhat to point downward, so that cuttings will go toward the old motor-compressor.

It is not desirable that the cuttings get into the old motor-compressor, but it has to be opened, reworked, and cleaned anyway, so the cuttings will be removed. If they get into the suction line, they will be washed into the new compressor.

With a fine file, square and smooth the end of the tubing if fittings are to be used. In any case, the burred edges should be smoothed off, both inside and outside, and the inside wiped out as well as possible with a clean cloth.

The open ends of the stubs of tubing left on the motor-compressor should be pounded closed to keep as much dirt, air, and moisture out of the old motor-compressor as possible. It will be reworked; and taking this small precaution will reduce some of the work and parts replacement.

CONNECTING THE NEW MOTOR-COMPRESSOR

But how is the new (or rebuilt) motor-compressor to be connected to the discharge and suction lines? There are four methods in common use. These are as follows, arranged in the order of their popularity:

1. Silver soldering, or as it is more accurately called, silver alloy brazing.
2. Flared tube fittings.
3. "Hard" soldering, with 95-5 (95% tin, 5% antimony) solder.
4. Soft soldering, with 50-50, 60-40, or other lead-base solders.

The service engineer will have to choose what method to use, and in making this choice, he should consider the following factors:

If the manufacturer of the unit or motor-compressor issues instructions on how to make the exchange, these instructions should be followed. That manufacturer has good reasons for his choice of methods and the procedure that he specifies.

Some of these reasons may be: materials used in the motor-compressor or in other parts of the system, oiling system, location or type of strainers, or other features of his product.

Moreover, the procedure that is found to be best by one manufacturer for his product, may not be suitable on some other manufacturer's product. Just because one manufacturer specifies a certain method or procedure is no reason that it is best or even suitable for all other makes.

However, in the absence of any specific instructions by the manufacturer, the service engineer will have to make his own choice, taking all of the factors into consideration that he can determine. Perhaps some of the following comments may help him in making that choice.

SILVER ALLOY BRAZING

1. It is easy to see why silver soldering is the most popular. It makes a tight, strong joint that is not apt to deteriorate and leak, and that will stand a good deal of vibration without breaking.

2. Silver soldering is comparatively easy to do. The average experienced serviceman is familiar with silver soldering; many men seem to find it simpler and easier to make a good silver-solder joint than a soft solder joint.

3. Silver soldering can be done with an acetylene torch, with or without oxygen, or it can be done with an ordinary blow torch.

4. There are several silver solders, or silver brazing alloys as they are more properly called, that are particularly suitable for the metals of which the lines are made: copper, steel, or aluminum.

5. Silver soldering makes structurally strong joints, that will stand more abuse than soft solder joints.

6. Silver solder joints will withstand higher temperatures without softening or leaking than soft solder joints.

On the other hand, silver soldering has some disadvantages:

1. It requires a temperature of the metal of over 1,100° F. This tends to crystallize the tubing and make it brittle unless the heating is carefully done. But more important, this red-hot temperature of the metal causes the formation of a hard scale inside and outside the brazed joint.

This hard scale is not too serious on the outside of the tubing, for it can be removed with a wire brush, but, unless precautions are taken, the same type of scale forms on the inside of the tubing adjacent to the joint. There it is almost impossible to remove; but the "Freons" or methyl chloride are good solvents, and gradually remove the scale and carry it through the system.

This hard scale can quickly ruin a compressor, and it can and does cause stoppage of the capillary tube or expansion valve. Therefore, the scale from silver soldered joints must be kept from going into the compressor or capillary tube or valve.

Motor-compressors have suction inlet screens, but it is good practice to install a strainer or scale trap between the joint in the suction line and the motor compressor. It must be of ample size, and it must have very little restriction; otherwise its pressure drop will seriously reduce the capacity of the motor-compressor.

A screen should also be installed at the outlet of the condenser, so as to catch any scale washed off from the silver soldered joint between the compressor discharge and the condenser.

A combination strainer and drier can serve this purpose very nicely, for a drier should be installed at that point anyway to remove any moisture that may be introduced into the system by having it open and replacing the motor-compressor.

Care should be taken that the drier has ample screen area, for many driers are made useless on a system because they become stopped up, rather than because they have absorbed their capacity.

PREVENTION OF SCALING

It is better to take measures to prevent the inside scaling of silver soldered joints than it is to remove scale after it is formed. This can be done, and it is common practice in factories where many joints in evaporators, condensers, etc., are silver soldered.

The scale that forms is mostly an oxide from the combination of the metal and oxygen. Therefore, if oxygen can be kept away from the hot metal, the scale will not form; at least not in sufficient quantity to cause trouble.

The air in the tube being silver soldered can be replaced with some inert gas that does not oxidize the metal. The system is empty of refrigerant anyway, and should have been blown out before the new motor-compressor is installed. A drum of the gas is connected, and the gas flowed through the tubing being silver soldered, and then allowed to escape to the outside air.

Dry nitrogen is excellent for this purpose in the field, but for volume production in factories, or for use in the shop, ordinary natural gas can be used, and the escape end lighted. The gas is flowed through slowly, for it is only necessary to keep a small positive pressure inside the tubing.

Silver soldering, or any other soldering, brazing, or welding, is a rather "messy" operation to employ in the user's kitchen or office. It means bringing in a torch and other equipment; so a tarpaulin or cloth should be spread to catch cuttings, flux, excess solder, or other trash, and on which to lay tools, torch, and materials. Care should also be taken not to scorch a wall or the cabinet; ignite lint or oil; or cause smoke.

SELECTION OF THE SILVER ALLOY

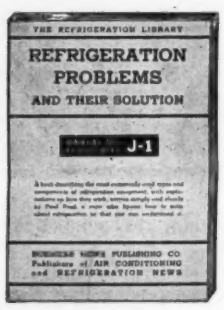
Care must be excercised in the selection of the silver alloy according to the metals to be joined. For silver soldering two pieces of copper tubing, a silver alloy may be used that is mostly copper, with only 15 or 20% silver, and a small per cent of phosphorus.

If either of the tubes are steel, the alloy should have a much higher silver content (about one-half) and the remainder copper with perhaps some other metals in small percentages, but no phosphorus.

In any case, use only the flux specified by the manufacturer of the alloy, and observe the proper rules as to the cleaning of the metals, clearance between surfaces, heating the joint, and applying flux and silver alloy.

(To Be Continued)

by PAUL REED



REFRIGERATION PROBLEMS

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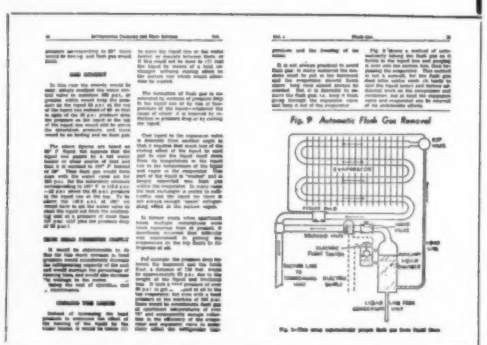

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NCRSA Schedules Meeting Nov. 8-9--

(Concluded from Page 1, Col. 2)

jects. Then the panelists will be peppered with questions from the floor on their topics.

On Monday morning, Nov. 8, R. J. Wischusen, president of the association, will open the convention with "An Objective Look at Distribution in Our Industry." During the same session, M. M. Zimmerman, editor and publisher of *Super Market Merchandising*, will tell of "New Trends in Super Market Layout and Merchandising" and C. V. Hill, president of C. V. Hill & Co., Inc., will comment on "How Teamwork on the Part of Manufacturers and Distributors Pays Off."

Financing, Rental Agreements Discussed

In the afternoon, George F. Wiedemer, NCRSA vice president, will answer the question "How Can Distributors Finance Sales to Their Best Advantage?". Herbert W. Foedisch of the Providence Trust Co., Philadelphia, will discuss "Rental or Lease Agreements" and Marshall I. Groff of the Indemnity Insurance Co. of North America will talk on "Casualty Insurance and Its Application to Members of NCRSA."

After the forum discussion Tuesday morning, Robert Hughes, assistant sales manager of the Air Conditioning and Refrigeration Div. of Worthington Corp., will outline "The Benefits of Air Conditioning to the Modern Food Store."

At the afternoon session, Donald Denny, Dayton distributor, will describe "Operating Practices and Accounting Procedures that Lead to a Profitable Operation." Milton Schwartz, New York City distributor, will outline "Selling Economies." E. B. Ward, South Bend, Ind. distributor, will tell "How We Should Look to our Customers."

Mfr. To Speak

Only manufacturer speaker at that session is Leon Prince of the Bally Case & Cooler Co. who will describe "The Value of Individual Case Sales to the Distributor."

The Commercial Refrigerator Distributing Association of New York will be hosts at a reception Monday evening. This will be followed by an informal dinner at which Wayman Parker, president of the Rotary Club of Jacksonville, Fla. will speak on "Pink Pills for Pale People."

Prior to the convention on Sunday, the NCRSA board of directors will hold a meeting at 12:30 p.m. Complete registration to include two luncheons and the dinner costs $21.50. Registration will start at 2 p.m. Sunday afternoon.

New officers will be elected and introduced just prior to adjournment of the convention. All sessions will be held in the Keystone room.

The complete program follows:

MONDAY, NOV. 8

10 a.m.—Convention called to order by R. J. Wischusen, president, NCRSA.

10:10 a.m.—NCRSA's Place on Your Team. Marie H. Lawton, executive secretary, NCRSA.

10:25 a.m.—"An Objective Look at Distribution In Our Industry," R. J. Wischusen, executive vice president, Engineering & Refrigeration, Inc., Jersey City, N. J.

10:55 a.m.—"New Trends in Super Market Layout and Merchandising," M. M. Zimmerman, editor and publisher, *Super Market Merchandising*, New York City.

11:25 a.m.—"How Teamwork on the Part of Manufacturers and Distributors Pays Off," C. V. Hill, president, C. V. Hill & Co., Inc., Trenton, N. J.

12:30 p.m.—Luncheon, Keystone Foyer.

2:10 p.m.—"How Can Distributors Finance Sales to Their Best Advantage?", George F. Wiedemer, president, Cable-Wiedemer, Inc., Rochester, N. Y.

2:35 p.m.—"Rental Or Lease Agreements," Herbert W. Foedisch, Provident Trust Co., Philadelphia.

3:10 p.m.—"Casualty Insurance and Its Application to Members of NCRSA," Marshall I. Groff, manager, Home Office Service Office, Indemnity Insurance Co. of North America, Philadelphia.

6 p.m.—Reception, Penn Top Center. Hosts: Commercial Refrigerator Distributing Association of New York.

7 p.m.—Informal Dinner. "Pink Pills for Pale People," H. Wayman Parker, president, Rotary Club of Jacksonville, Fla.

TUESDAY, NOV. 9

9:30 a.m.—Panel forum, R. J. Wischusen, moderator.

I. MANAGEMENT

(a) The Role of the General Manager in the Marketing Team.

(b) Purchasing Procedures and Inventory Control.

(c) The Importance to the Sales Effort of Good Finance Plans.

Panel Members — *Distributor:* Frank D. Stella, president, F. D. Stella Products Co. *Manufacturer:* A. B. Biddle, vice president, Hussmann Refrigeration, Inc.

II. SALES DEPARTMENT

(a) The Role of the Sales Manager.

(b) How to Select, Train, and Inspect the Sales Force.

(c) Keeping the Sales Force Informed of Company Policies and Operations.

(d) Supplying Salesmen with Adequate Product Knowledge.

Panel Members — *Distributor:* Ray Winther, president, Ray Winther Co. *Manufacturer:* R. L. Tyler, president, Tyler Refrigeration Corp.

III. SERVICE PROBLEMS

(a) Service Contracts.

(b) Training Servicemen to be Good Will Ambassadors for the Company.

(c) How Sales Prospects are Handled by the Service Department.

(d) How the Sales and Service Departments Should Work Together.

Panel members — *Distributor:* H. A. Hattenbach, partner, The Hattenbach Co.

Summation—R. J. Wischusen.

"The Benefits of Air Conditioning to the Modern Food Store," Robert Hughes, assistant sales manager, Air Conditioning and Refrigeration Div., Worthington Corp., Harrison, N. J.

12:30 p.m.—Luncheon, Keystone Foyer.

2:10 p.m.—"Operating Practices and Accounting Procedures That Lead to a Profitable Operation," Donald D. Denny, president, Modern Market Fixtures, Inc., Dayton.

2:35 p.m.—"Selling Economies," Milton Schwartz and Co., New York City.

2:55 p.m.—"How We Should Look to Our Customers," E. B. Ward, president, Baker-Ward, Inc., South Bend, Ind.

3:15 p.m.—"The Value of Individual Case Sales to the Distributor," Leon Prince, partner, Bally Case and Cooler Co., Bally, Pa.

4 p.m.—Adjournment.

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Commercial Shipments--

(Concluded from Page 1, Col. 2)

tinued to drop, falling to 8.4% from 9.6% in 1952, 10.8% in 1951, and 12.8% in 1950.

Single-duty self-service cases rose slightly to 14.5% from 14.2% in 1952. Ratios for this product type in 1951 and 1950 were 12.6% and 12.3%, respectively. Double-duty cases were unchanged at 14.2%. Previous ratios here were 17.7% and 17%.

After rising from 13.2% in 1950 to 13.6% in 1952, self-service vegetable refrigerators declined to 11.4% in 1953. But conventional vegetable refrigerators, which stood at .7% in 1950, .5% in 1951, and .8% in 1952, increased to 2.2% last year.

Self-service low temperature refrigerators captured 20.7% of dollar volume in 1953, against 17.4% in 1952, 15.5% in 1951, and 14.2% in 1950. Conventional low temperature refrigerators dipped to .6% from .9% in 1952.

These product ratios are studied closely by manufacturers who are members of the CRMA, and are used as a guide in determining their own particular product ratios in their *manufacturing* planning.

The CRMA members, as part of the management assistance rendered by the association, get a monthly analysis of combined sales figures. Thus they are able to compute their relative position within 30 days after the close of the month.

1950-1953 Ratios of Various Types of Products to Total Commercial Refrigerator Shipments As Reported to Commercial Refrigerator Manufacturers Association

Product or Classification	1950 %	1951 %	1952 %	1953 %
1. Single Duty Cases—Conventional Type	5.4	3.4	2.8	3.5
2. Double Duty Cases—Conventional Type	12.8	10.8	9.6	8.4
Total This Class	18.2	14.2	12.4	11.9
3. Single Duty Cases—Self-Service	12.3	12.6	14.2	14.5
4. Double Duty Cases	17.0	17.7	14.2	14.2
Total This Class	29.3	30.3	28.4	28.7
5. All Other Types Display Cases	.9	1.2	1.0	.6
Total All Above Classes	48.4	45.7	41.8	41.2
6. Vegetable Refrigerators—Self-Service	13.2	13.3	13.6	11.4
7. Vegetable Refrigerators—Conventional	.7	.5	.8	2.2
Total This Class	13.9	13.8	14.4	13.6
8. Low Temperature Refrigs.—Self-Service	14.2	15.5	17.4	20.7
9. Low Temperature Refrigs.—Conventional	.4	1.0	.9	.6
Total This Class	14.6	16.5	18.3	21.3
10. Dairy Refrigs. & Wall Boxes	2.1	1.9	2.4	2.3
11. Reach-In Refrigerators	8.2	10.2	9.9	9.6
12. Walk-In Coolers	7.2	6.3	5.4	5.4
13. All Other Equipment	5.6	5.6	7.8	6.6

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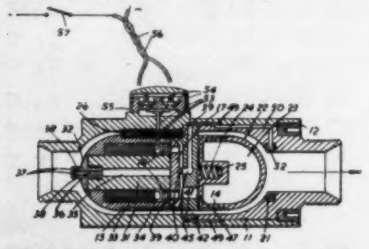
PATENTS

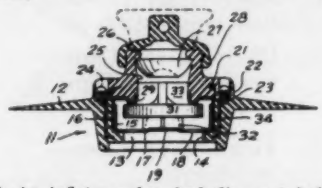
Week of June 1 (Concluded)

2,679,856. PILOT OPERATED VALVE FOR CONTROLLING THE FLOW OF FLUIDS. Jacobus Johannes Gerritsen, Redhill Aerodrome, Surrey, and Richard Cox Abel, Hove, Sussex, England. Application Jan. 29, 1951, Serial No. 208,279. 5 Claims. (Cl. 137—221.)



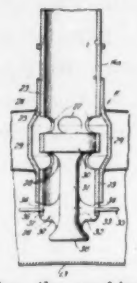
2. A fluid flow controlling valve comprising a valve body having a substantially cylindrical cavity therein with an inlet opening and an outlet opening at opposite ends thereof, the wall defining the end of said cavity adjacent the outlet opening being substantially hemispherical, the said wall defining said cavity having an axially-extending passage therethrough extending from a point substantially midway of the length of said cavity to a point downstream of and continguous to said outlet opening; a coaxial cylindrical core within said cavity with its outer wall spaced inwardly from the wall defining said cavity to provide a flow passage therebetween, said core including a fluid pressure cylinder adjacent the outlet opening of the valve cavity and having a cylinder head disposed transversely of and substantially midway of the length of said cavity and core, said head having a passage therethrough with the outer end of said passage communicating with said axially-extending passage through said valve body, said cylinder communicating with the inlet opening of the valve cavity through an orifice located on the axis of said core, and a piston within said cylinder having a substantially hemispherical outer end portion directed toward the outlet opening of the valve cavity, said substantially hemispherical outer end portion of said piston constituting a valve for seating on said outlet opening; a bypass from said cylinder including said passage through the cylinder head and said axially-extending passage through said valve body; and a controllable throttling valve in said bypass for controlling the flow of fluid therethrough, said orifice being of lesser area than the bore defining said bypass.

2,679,857. ADJUSTABLE REINFORCED MOLDED INFLATOR VALVE. Linus E. Russell, Springfield, Ohio, assignor to Peters & Russell, Inc., Springfield, Ohio, a corporation of Ohio. Application July 30, 1951, Serial No. 239,333. 9 Claims. (Cl. 137—232.)



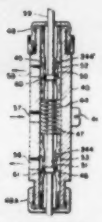
1. An inflator valve, including a tubular body made of a relatively soft molded plastic material, a tubular closure for said body made of a similar material and having a flange overlying the end of said body, relatively stiff strengthening members molded in the material of said body and in the flange of said closure respectively, removable fastening devices extending between said strengthening members to hold said body and closure in assembled relation and adjustable to effect a limited relative axial motion between said body and said closure, an annular projection on said closure protruding into the hollow interior of said body to define a valve seat, and a valve reciprocable in said body to engage and disengage said seat.

2, 679, 859. FLOAT VALVE. Theodore H. Kummer, Waukesha, Wis., assignor to Cherry-Burrell Corp., Chicago, Ill., a corporation of Delaware. Application April 25, 1952, Serial No. 284,267. 5 Claims. (Cl. 137—432.)



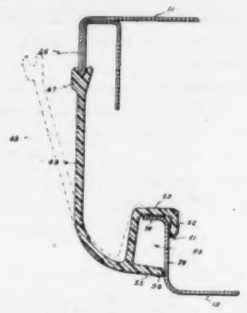
1. In a valve, the combination with a substantially vertically disposed supply duct having an opening in the lower end therof of a sleeve slidably engaged on said duct adjacent the lower end thereof, a float secured to said sleeve, and a plug in said duct adjacent the lower end thereof, said duct being provided with a plurality of ports spaced apart longitudinally, said plug being normally positioned within said duct between the respective ports so as to substantially restrict liquid communication through said duct from one side of said plug to the other, and said sleeve having an imperforate external enlargement providing within said enlargement a liquid passageway having a longitudinal length greater than the longitudinal distance between the respective ports thereby affording a bypass around said plug when the sleeve is moved into a position to afford communication between said passageway and the respective ports.

2,679,862. CONTROL APPARATUS. Harvard H. Gorrie, Cleveland Heights, and Jack F. Shannon, Euclid, Ohio, assignors to Bailey Meter Co., a corporation of Delaware. Original application Sept. 2, 1948, Serial No. 47,516. Divided and this application Aug. 31, 1950, Serial No. 182,512. 7 Claims. (Cl. 137—622.)



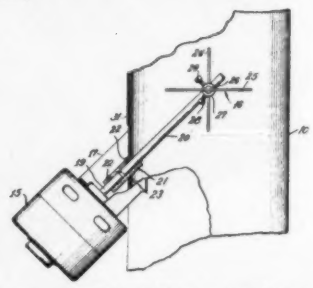
1. In a regulating mechanism, the combination of a member supported for movement in a given plane, a pilot valve for producing a regulating effect, said pilot valve including an elongated valve element supported for movement in a plane substantially normal to said member, adjustable means carried by said member and providing a flat surface engageable by one end of said valve element, and means carried by said member while separate from the member and universally yieldable and engaging the opposite end of said valve element for holding the latter in engagement with said flat surface.

2,679,944. REFRIGERATOR BREAKER STRIP. Evans T. Morton, Chicago, Ill., assignor to Admiral Corp., Chicago, Ill., a corporation of Delaware. Application June 15, 1949, Serial No. 99,293. 1 Claim. (Cl. 220—9.)



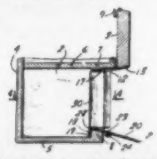
In a refrigerator cabinet construction, the combination of spaced inner and outer shells forming a compartment open at its front, said outer shell having marginal portions along the open front of the compartment provided with an inwardly extending stiffening flange having a free side edge, said inner shell also having marginal portions along the open front of the compartment provided with a stiffening flange extending toward the outer shell and terminating in a forwardly extending laterally disposed lip spaced from the flange of said outer shell and offset rearwardly from the plane of the said flange of said outer shell, and a breaker strip formed of insulating material and closing the gap between the inner and outer shells around the open front, said breaker strip comprising an elongated strip flat throughout the major portion of its width from one side edge and being then arcuate transversely and merging into a second flat side edge portion disposed laterally of the first side portion, the first mentioned side edge of said strip being thickened and formed with a longitudinally extending groove into which the free side edge of the stiffening flange of said outer shell fits, and a web integrally united with the second mentioned flat side edge portion of the strip and extending laterally therefrom towards the outer shell and carrying a flange extending rearwardly therefrom across the lip of the stiffening flange of the inner shell and terminating in an inwardly extending lip overlapping the rear side face of the said stiffening flange of the inner shell and firmly holding the breaker strip in place with the front side face of the stiffening flange of the inner shell abutted by the said second side edge of the breaker strip, and said flange of the web in face-to-face engagement with the forwardly extending lip of the said stiffening flange of the inner shell.

2,679,972. MOTOR-DRIVEN BLOWER MOUNTED ON PIPE. Frank J. Brumme, Bloomington, Ill. Application June 16, 1949, Serial No. 99,527. 2 Claims. (Cl. 230—117.)



1. An air duct and fan assembly comprising a substantially straight length of pipe, a motor, a motor support which projects from the side of the pipe in a direction oblique to the longitudinal axis of the pipe and is interposed between the motor and pipe and has the motor secured endwise thereto at the outer end thereof and has the inner end secured directly to the side wall of the pipe, a shaft which is rotated by the motor and supported solely thereby and projects axially therefrom through said support and obliquely into the pipe through the side wall thereof beyond the inner end of said motor support and is spaced apart from and free of contact with said support and pipe, and a fan within the pipe and secured on the shaft to rotate therewith, said support being formed with a space therein between the motor and pipe through which the shaft extends and through which air is circulatable from the exterior of the support.

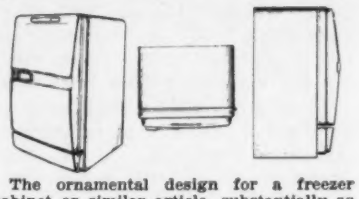
2,680,053. LOADING DEVICE FOR REFRIGERATED STORAGE COMPARTMENTS. Samuel Bohn, Nutley N. J. Application Dec. 21, 1950, Serial No. 201,918. 4 Claims. (Cl. 312—310.)



1. In a storage compartment for a refrigerated display cabinet having a door opening spaced from the bottom of the compartment floor by a saddle, in combination, an inclined plate having an outer edge rested on the floor in front of the cabinet, the inner edge portion of the inclined plate being bent at the inner edge of said saddle to present a narrow flange, and a strip secured to the inside wall of said saddle close to the floor of the compartment, said narrow flange and strip forming a hinge whereby the inclined plate may be turned to operative position extending through the door opening or to inoperative position within the compartment.

DESIGNS

172,335. FREEZER CABINET OR SIMILAR ARTICLE. Robert D. Budlong, Skokie, Ill., assignor to Amana Refrigeration, Inc., Amana, Iowa, a corporation of Iowa. Application Feb. 3, 1954, Serial No. 28,818. Term of patent 14 years. (Cl. D67—3.)



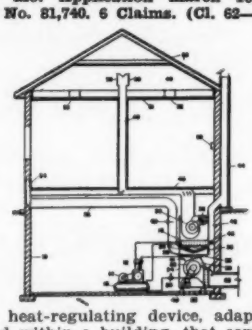
The ornamental design for a freezer cabinet or similar article, substantially as shown and described.

Week of June 8

2,680,353. EVAPORATOR FOR REFRIGERATORS. Bruce L. Baxter, Louisville, Ky., assignor to Reynolds Metals Co., Richmond, Va., a corporation of Delaware.

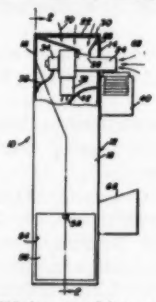
1. A continuous tube evaporator comprising a core shell having an open front wall, a continuous tube disposed about said shell and having a plurality of return bends disposed in opposed relation upon a single wall of said shell, an integral weld-free accumulator of larger diameter than said tube and having a pair of elongated tapered ends, said accumulator being obliquely secured to the back of said shell, both of said tapered ends being bent, one of said tapered ends being butt welded to one end of said continuous tube and the other of said tapered ends being doubly bent to form a U-shaped configuration and welded to a suction conduit, the other end of said continuous tube being welded to a capillary tube element and disposed adjacent said suction conduit disposed on the back of said shell.

2,680,354. APPARATUS FOR HEATING AND COOLING. Ernest P. Gygax, St. Louis, Mo. Application March 16, 1949, Serial No. 81,740. 6 Claims. (Cl. 62—129.)



1. A heat-regulating device, adapted to be used within a building, that comprises a casing, a partition dividing said casing into two sections, a blower in one section of said casing, a conditioned-air duct that is in register with the outlet of said blower and extends from said one section of said casing, a return duct extending to said one section of said casing, a blower in the other section of said casing, an air inlet duct extending from a porous-wall chamber in the ground to said other section of said casing, an exhaust duct extending from said other section of said casing to an exhaust outlet of said building, a coil of a compression-expansion cycle unit disposed in said one section of said casing between said return duct and said blower, a second coil of said compression-expansion cycle unit disposed in said other section of said casing between said inlet and exhaust ducts, a compressor, and dampers between said one and said other sections of said casing, said dampers being openable to provide "make up" air for said one section of said casing.

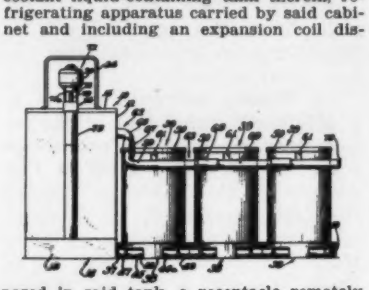
2,680,355. DEHUMIDIFYING MACHINE. Gracie Hebert Colomb, Lafayette, La.



A dehumidifying machine comprising an upright cabinet, an air inlet conduit extending horizontally into the cabinet adjacent its upper end for drawing in outside air, an air inlet in the top of said cabinet for receiving air from a room in which said cabinet is mounted, a single blower for drawing air in through said air inlet conduit and said air inlet and forcing the same downwardly through said cabinet and out of a horizontal air outlet, said blower being connected to said air inlet conduit and said air inlet being connected to said air inlet conduit, said air outlet being spaced vertically from the bottom of said cabinet, a cooling coil disposed below said blower in the path of air circulated thereby, a heat exchange unit carried by said cabinet externally thereof, said heat exchange unit being operatively connected to said cooling coil, a removable foraminous basket for deliquescent material disposed in the cabinet below said cooling coil and above said air outlet, a drip tray in said cabinet below said foraminous basket, said drip tray being disposed below said air outlet.

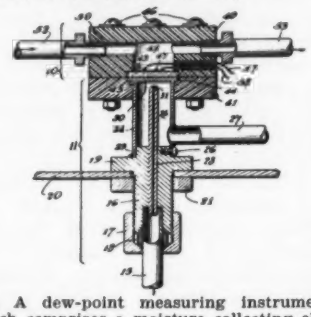
2,680,356. SPRAY-TYPE EXPANSIBLE MILK COOLER. Ralph E. Wallenbrock and Eugene E. Kightly, Evansville, Ind., assignors to International Harvester Co., a corporation of New Jersey.

1. A cooler of the class described, comprising in combination, a cabinet having a coolant liquid-containing tank therein, refrigerating apparatus carried by said cabinet and including an expansion coil dis-



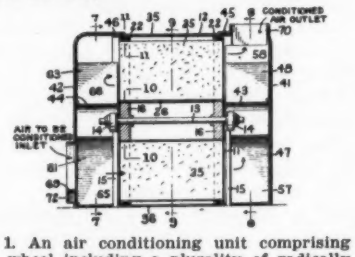
posed in said tank, a receptacle remotely disposed from said cabinet and adapted to support an article to be cooled, a separate shroud-like cover adapted to enclose the article to be cooled and including a cap having a shower member attached thereto and depending therefrom for spraying liquid and a tubular liquid confining shield having an open end upon which said cap is positioned, conduit means for delivering liquid from said tank to said shroud, said receptacle having liquid collecting means therein, and means for conducting liquid from said receptacle to said tank.

2,680,371. DEW POINT MEASURING DEVICE. Edwin W. Donath, Chicago, Ill., assignor to Illinois Testing Laboratories, Inc., Chicago, Ill., a corporation of Illinois. Application July 13, 1951, Serial No. 236,559. 17 Claims. (Cl. 73—17.)



1. A dew-point measuring instrument which comprises a moisture collecting element, means for surrounding the said element with a gas sample, means for lowering the temperature of the said element at a smooth rate, whereby said element will have moisture condense thereon when the dew-point of the gas is reached, and said element being of such mass that its heat capacity is comparable to that of the initial condensate deposited thereon, and heat sensing means for detecting an abrupt change in said rate resulting from the liberation of heat of condensation of said moisture at the dew-point.

2,680,492. AIR DEHYDRATION UNIT. Roger S. Kopp, Arlington, Va. Application June 22, 1951, Serial No. 232,990. 10 Claims. (Cl. 183—4.6.)



1. An air conditioning unit comprising a wheel including a plurality of radically disposed flat absorption plates, said absorption plates being uniformly spaced apart whereby the wheel is normally balanced, means for supporting said wheel for free rotation about a horizontal axis, a casing enclosing said wheel, a plurality of plenum chambers formed in the casing at each end of said wheel, means for conducting moist air into said casing and by means of said plenum chambers axially through a segment of said wheel to permit

(Continued on next page)

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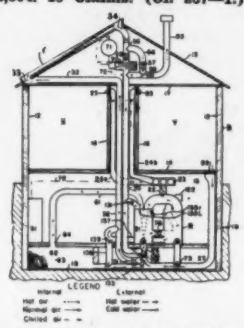
PATENTS

(Continued from preceding page)

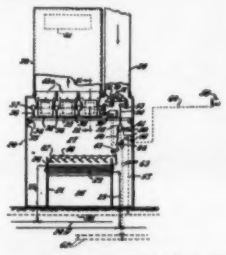
absorption of moisture by the plates then in said segment, and means for conducting heated air into said casing and by means of other plenum chambers axially through an angularly offset segment of said wheel to permit absorption of moisture by said heated air from the plates then in said offset segment, the absorption of moisture by the plates in one segment of the wheel operating with the loss of moisture by the plates in the angularly offset segment of the wheel to unbalance and effect rotation of the wheel.

2,680,565. SOLAR HEATING APPARATUS AND METHOD. George O. G. Lof, Boulder, Colo., assignor to University of Colorado. Application Dec. 3, 1945, Serial No. 632,504. 19 Claims. (Cl. 237—1.)



4. A heating system for buildings comprising means on an exterior surface of a building for heating air with solar rays, air circulating means, inclusive of a blower and conduits, for delivering air so heated into a room of the building and for returning cool air from said room to the solar heating means, a water heating unit in the building associated with one of said conduits and arranged to heat the water by the passage therethrough of hot air from the solar heating means, and a valve-controlled by-pass conduit for conducting said hot air around said water-heating unit when the water therein attains a predetermined temperature.

2,680,566. AIR CONDITIONING APPARATUS AND SYSTEM. Russell R. Gannon, Cincinnati, Ohio.

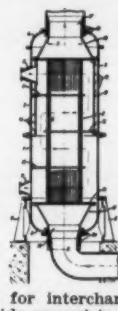


1. In a unit for conditioning the air contained within a closed area, a heating chamber, air heating means within said chamber, a conduit extending between said closed area and said chamber, a second chamber in said unit remote from said air heating means, a conduit extending between said second chamber and the out-of-doors, dampers for controlling the admission of fresh air from the out-of-doors into said second chamber, a supply plenum extending between said second chamber and said closed area, dampers for controlling the admission of heated air from said first chamber to said second chamber, and means for forcing air from said second chamber through said supply plenum into said closed area, and linkage between said heated air dampers and said fresh air dampers arranged so that as one set of said dampers moves towards a closed position the other set of said dampers moves towards an open position, means for actuating said linkage in response to the temperature conditions of said closed area, said last mentioned means comprising a thermostat located in said closed area and a damper motor operatively associated with said thermostat, and said linkage including a lost motion arrangement arranged so that when said dampers are moved in response to said thermostat said fresh air dampers are moved to a predetermined position of minimum opening before any corresponding movement of the heated air dampers can take place.

2,680,588. REGENERATIVE HEAT EXCHANGING APPARATUS HAVING COOLED PARTITION WALLS. Sven Ivar Trulsson, Enskede, and Hans Robert Nilsson, Ektrop, Stockholm, Sweden, assignors, by mesne assignments, to Jarvis C. Marble, New York, N. Y., Leslie M. Merrill, Westfield, N. J., and Percy H. Batten, Racine, Wis., trustees.

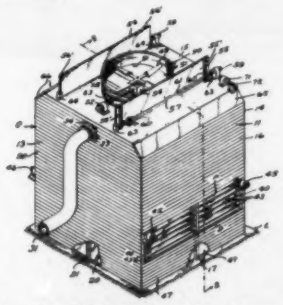
1. Regenerative heat exchange apparatus comprising stationary housing structure providing adjacent channels for flow of different fluid media between which heat is to be exchanged and a rotor mounted for rotation within said structure, said rotor having a series of radial partitions for dividing the rotor into a plurality of sector-shaped compartments, said compartments containing regenerative heat exchange material and said rotor being mounted so that said material is passed successively through said ducts, each of said partitions comprising spaced plate members providing ducts for flow of a cooling fluid, and ports for admitting and exhausting a cooling fluid to and from said ducts.

2,680,600. HEAT INTERCHANGER. Max Rothemund, Augsburg, Germany, assignor to Maschinenfabrik Augsburg-Nurnberg A. G., Augsburg, Germany, a corporation of Germany.



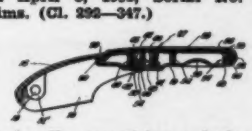
1. A device for interchanging heat between two fluids comprising an outer casing, a substantially upright system of tubes including an upper tube plate and a lower tube plate inserted therein and adapted to be surrounded by the first of said fluids being at a higher pressure and to be traversed by the second of said fluids, and a supporting system comprising a plurality of stay bolts supporting one of said tube plates and transmitting the weight of the tube system to the middle part of the casing.

2,680,603. COOLING TOWER. John E. Taylor, Kansas City, Mo., assignor to Foster Wheeler Corp., New York, N. Y., a corporation of New York. Application Nov. 6, 1951, Serial No. 255,032. 9 Claims. (Cl. 261—22.)



1. A mechanical draft cooling tower comprising means forming a cell, a fill disposed within the cell wherein air and liquid pass in direct heat exchange relationship with one another, said cell having an upper air space above the fill and a lower air space beneath the fill, partition means dividing the fill into a plurality of laterally adjacent passages, said passages being in communication at the opposite ends thereof with said upper and lower air spaces respectively, liquid distributing means above the fill through which liquid to be cooled is distributed to the fill, air inlet means in communication with one of said air spaces and the atmosphere at the part of the tower adjacent thereto, damper means controlling the flow of air through said air inlet into the one air space, other air inlet means in communication with the other air space and the atmosphere at the part of the tower adjacent thereto, other damper means controlling the flow of air through said other air inlet into the other air space, and exhaust air outlet in communication with said other of the air spaces and the atmosphere, an exhaust fan associated with the exhaust air outlet so as to withdraw air from said other air space, and air flow control means operable from one position to another position for controlling the flow of air through said other air space into the passages, said air flow control means being so constructed and arranged as to permit air from the other air space to pass through the passages in series to said exhaust air outlet when said control means is in said one position and to permit air from said one air space to pass through the passages in parallel to said exhaust air outlet when said control means is in said other position.

2,680,642. REFRIGERATOR DOOR HANDLE. Theodore H. Koeber, Oak Park, Ill., and Coleman F. Smith, Evansville, Ind., assignors to International Harvester Co., a corporation of New Jersey. Application April 3, 1951, Serial No. 218,922. 3 Claims. (Cl. 292—347.)

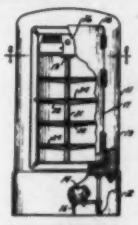


2. A handle comprising a body portion having a depressed area formed in one surface thereof, one marginal edge of said depressed area being positioned substantially at one marginal edge of said body portion, said one marginal edge of said body portion having a plurality of spaced-apart flanges extending therefrom, an insert removably mounted over said depressed area, said insert having a shape sufficient to substantially cover said depressed area, one marginal edge of said insert being provided with a depending hooked-shaped portion, said hooked-shaped portion extending beyond said marginal edge of said body portion for receiving each of said flanges.

2,680,667. ACCESS DOOR FOR EVAPORATIVE CONDENSERS. Daniel D. Wile, Whittier, Calif., assignor to Refrigeration Engineering, Inc., Los Angeles, Calif., a corporation of California.

1. An access door structure for cooperation with an access opening formed in a side of a cabinet containing a liquid-laden atmosphere, said door structure involving: channel members disposed along the top and side margins of said access opening and having a flange directed normal to said cabinet side and an outturned flange; a trough structure secured to the bottom margin of said opening and extending under the ends of said channel members; and a door panel having top and side margins folded upon themselves to fit over said outturned flanges, an inner surface of said door panel being in close proximity to said normally directed flanges to form a fluid seal, said door panel having a lower margin adapted to enter said trough and immerse in a liquid contained therein.

2,680,668. ROTATING TRAY REFRIGERATOR UNIT. Charles A. Stanfiel, Fort Amador, C. Z., and Robert J. Reilley, Albuquerque, N. M. Substituted for abandoned application Serial No. 44,036, Aug. 13, 1948. This application Feb. 28, 1952, Serial No. 273,396.



1. A household refrigerator unit including a vertical cylindrical cabinet having its top and bottom closed, a vertical shaft mounted coaxially within said cabinet with its ends rotatably journaled in said top and bottom, at least one set of rack bars carried radially by and spaced about said shaft and lying in a common plane, each of said bars having one end secured to said shaft, an upstanding lug on the other end of each bar, a pair of complemental grid-like semi-circular tray segments arranged in coplanar relation and supported on said set of rack bars to form a circular tray, the facing edges of said tray segments overlapping each other, said tray segments being apertured at spaced intervals along the peripheral margins to receive the adjacent upstanding lugs, and a door hingedly attached to said cabinet to permit access therein.

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Government Contracts

PROCUREMENT INFORMATION

The following is a list of proposed procurements issued by the various indicated U. S. Government procurement offices. This list is compiled and made available daily on a free pick-up basis. Prospective bidders may obtain complete bid sets by a request **to the purchasing officer under which the purchase is listed** in this Synopsis. Be sure to identify completely the bid invitation you wish by including in your request the item description, the invitation number or reference number and the opening date.

DEPARTMENT OF DEFENSE

It is not necessary to refer solely to the issuing office for additional data on a bid invitation issued by any of the following U. S. Army Ordnance Offices: Ordnance Tank Automotive Center; Detroit Arsenal; Frankford Arsenal; Picatinny Arsenal; Raritan Arsenal; Ordnance Ammunition Center, Joliet, Ill.; Rock Island Arsenal; Springfield Armory; Watertown Arsenal; and Watervliet Arsenal. Complete information on any purchase listed by any of those offices alone can be obtained from the Ordnance District Office nearest you. Its address is on file in your nearest Department of Commerce Field Office. Do not ask an Ordnance District Office for information on a purchase unless it is listed by one of the above-named offices.

Invitations for Bids numbers will be followed by the letter "B." Requests for proposals or quotations will be indicated in this column by the letter "Q" or, if numbered, the number will be followed by the letter "Q."

Description	Quantity	Invitation No.	Opening Date
The Armored Center, Central Purchasing Branch, Fort Knox, Kentucky			
Replacement of warm-air furnaces. The work consists of furnishing all labor, materials and equipment, removing existing warm-air furnace and furnishing and installing new warm-air furnaces in accordance with terms and conditions of the contract.	100 ea.	(AII-15-014-55-24)	9 Nov 54
Headquarters Air Materiel Command, Dayton, Ohio			
Sink photographic processing size 11 running water temperature controlled stainless steel one sink compartment without faucet. Over-all dimensions (approx.) length 48 in., width 26 in., height 46 in., comp with overflow stand pipe back splash panel frame support towel bar and temperature cont unit with adj press reg thermometer thermostat and plumbing fittings. In accord spec Mil-S-17438 (AER) dtd 5 Dec 1952.	30 ea.	IFB-55-13B Prime Class	26 Oct 54
Navy Purchasing Office, Brooklyn, New York			
Ranges, electric.	124 ea.	IFB-N140-117-55	29 Oct 54
District Public Works Office, Third Naval District, Federal Office Bldg., Rm. 633, 90 Church St., New York 7, New York			
Replace existing refrigerator in 100 dwelling units with nel electric self-contained refrigerators having a minimum net food storage capacity of 8 cu. ft. and a cross-the-top G30 pound capacity frozen food compartment, conning towers housing project, U. S. Naval Submarine Base, New London, Conn. Deposit of $10 required for bidding data.	Job	44594-B	4 Nov 54
Navy Purchasing Office, 3rd Ave. and 29th St., Brooklyn, New York			
Refrigerators	39 ea.	IFB-N140-120-55	8 Nov 54

GENERAL SERVICES ADMINISTRATION

Description	Quantity	Reference No.	App. Bid Date
Business Service Center, General Services Administration, Region 5, 575 U. S. Courthouse, 219 S. Clark St., Chicago, Illinois			
Refrigerators fed. spec. AA-R-211c.	2 ea.	DCH-69925	20 Oct 54

CONTRACTS AWARDED THROUGH OCT. 18

U. S. Army, 1819 West Pershing Rd., Chicago 9, Illinois

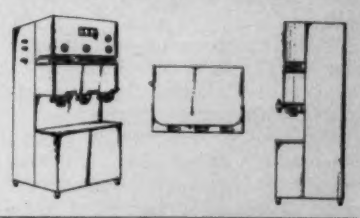
Refrigerator, mech. cooled, 8 cu. ft. cap. 55-41-B.—1896 ea., $174,998.—Westinghouse Electric Corp., 1625 K St., N.W., Washington 6, D. C.

Range, electric, domestic, tabletop, 4 surface cooking units. 55-25-B.—1875 ea., $148,485.—The Dortch Stove Works, Inc., Nashville Highway, Franklin, Tenn.

DESIGNS

172,379. COMBINED FREEZER AND DISPENSER FOR ICE CREAM OR THE LIKE. Franklyn Walker Boltz, Los Angeles, Florino Ferlisi, San Gabriel, and Elmer L. Olson, William L. Allinson, and Ernest E. Lindsey, Los Angeles, Calif.; said Boltz, said Ferlisi, said Olson, and said Allinson assignors to said Lindsey.

The ornamental design for a combined freezer and dispenser for ice cream or the like, substantially as shown at right.



DEVELOPMENT ENGINEER WANTED

Leading Midwest manufacturer of refrigeration and beverage equipment needs an aggressive, experienced Refrigeration Engineer, 35 to 45 years of age, to design and perfect new line of ice cube makers, walk-in coolers, soft drink dispensers. Salary open, with profit sharing plan.

Write BOX A5069, Air Conditioning & Refrigeration News

CLASSIFIED ADVERTISING

RATES for "Positions Wanted" $7.50 per insertion. Limit 50 words. 15¢ per word over 50.

RATES for all other classifications $10.00 per insertion. Limit 50 words. 20¢ per word over 50.

ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other address by actual word count. Please send payment with order.

POSITIONS WANTED

SALES REPRESENTATIVE—or sales administration. Four years selling air conditioning, refrigeration and heating equipment to industrial and contractor accounts. Age 27, single, degree Business Administration, will travel or relocate. Seek opportunity with manufacturer or distributor. Own auto. Presently employed by eastern manufacturer. BOX A5073, Air Conditioning & Refrigeration News.

FIELD SERVICE supervising and trouble shooting. Twenty years' electrical utility experience. Includes ten years' installing and trouble shooting refrigeration and air conditioning. Manage own wiring and refrigeration business as sideline. Very familiar with all types of electrical problems. Age 43. Excellent references. Willing to travel. Certificate member of R.S.E.S. BOX A5077, Air Conditioning & Refrigeration News.

POSITIONS AVAILABLE

REFRIGERATION ENGINEER required to assume responsibility of sales application department. Must have knowledge of heat transfer, plus proven ability to translate technical engineering ratings and data into informative pieces used by the sales department. Not less than five years' experience required with mechanical engineering degree or equivalent and field sales training experience. Reply to Mr. Campbell, ACME INDUSTRIES, INC., 600 N. Mechanic St., Jackson, Michigan.

PROJECT ENGINEER for the development of air conditioning equipment. Must be a graduate engineer, experienced in the design and development of hermetically sealed refrigerating circuits and heat transfer surfaces. Excellent position with well known manufacturer. Location Mid-West. Send complete resume of education, experience and salary requirements to BOX A5068, Air Conditioning & Refrigeration News.

ENGINEER—WE are looking for a man, age 28 to 45, with sheet metal design experience and some background in refrigeration. This man probably has a decent position now but recognizes its possibilities as limited. Possibilities for advancement are excellent with fast growing company engaged in design and production of special purpose air conditioning and refrigeration equipment. Inquiries will be handled in strictest confidence. Our employees know of this advertisement. Submit biographical sketch. BOX A5074, Air Conditioning & Refrigeration News.

EXPERIENCED SALESMAN for nationally advertised line of electric drinking water coolers and dehumidifiers selling to wholesale distributors. Both eastern and western territory open. Salary and expenses, and possibly car furnished. Consideration given to good merchandising record with other appliances and acquaintance with territory and trade. Applications confidential. Give details and references first letter. BOX A5075, Air Conditioning & Refrigeration News.

EQUIPMENT FOR SALE

FOR SALE: Brand new popular brand ¾ HP compressor with flywheel and service valves. $52.50—Model F 1 HP $62.50. Price includes free transportation to destination. Send for parts catalog listing other money saving values. WALTER W. STARR, 2833 Lincoln Avenue, Chicago 13, Illinois.

FOR SALE: Ruger floor crane with extension beam. Two ton capacity. LEWIS ENGINEERING SERVICE, 19003 John R, Detroit 3, Michigan. FOrest 6-1800.

FRANCHISES WANTED

CALIFORNIA SALES representative—former sales manager of large nationally known refrigerator and major appliance manufacturer, now and for several years operating successful West Coast sales agency, can handle an additional line of refrigeration products or appliance. Has had extensive experience in commercial and household refrigeration and other appliances. Thorough knowledge and acquaintance with all types of desirable distribution including retailers, wholesalers and manufacturers. Can give Eastern manufacturer efficient and trustworthy representation and can furnish top references who will vouch for merchandising ability and aggressiveness to get your job done. BOX A5072, Air Conditioning & Refrigeration News.

BUSINESS OPPORTUNITIES

HERMETIC REPAIR shop for sale in large midwest city. Completely equipped to rebuild all makes of hermetic units. Excellent accounts, good inventory, modern building—4,000 square feet including office, warehouse, and large parking area. Can be bought or leased. Ideal wholesale business for two or three partners. BOX A5076, Air Conditioning & Refrigeration News.

XUM

FIVE TEMPERATURES FOR FIVE FOOD TYPES—In this new Crosley Duo Shelvador freezer-refrigerator, there are five different temperatures for the five basic types of food needing cold storage.

BOTH IN ONE OR SIDE BY SIDE—Crosley customers can have their choice of a refrigerator and freezer in one unit or in matched appliances. The 13-cu. ft. freezer's door shelves will hold more than 100 packages. Refrigerator to the left is the 1955 Crosley Super Shelvador.

Crosley Introduces New Appliance Line--

(Concluded from Page 1, Col. 5)

The freezer rolls out on nylon rollers.

Temperature-moisture control in the fresh food compartment is said to be assured by a special refrigerating plate at the top.

This model and the new "Super Shelvador" (CAG-125) both feature the automatic through-the-door beverage server which Crosley introduced last year, and both also have complete roll-out interiors as well as fully recessed door shelves. Both of these fully automatic defrost models have three lift-out egg shelves which hold 27 eggs, and a "Butter Safe."

5 BASIC TEMPERATURES

Separate temperatures are provided for the five basic types of food needing refrigeration—frozen, dairy items, meats, fresh vegetables, and pastry, Crosley said.

Model CAG-125 is a 12.6-cu. ft. unit with a 70-lb. freezer locker. Other refrigerator models and highlight features are:

Model CAG-11—10.7 cu. ft.; 50-lb. freezer locker; custom styling; "Prestomatic" (pushbutton) defrosting with "Freeze-Away" defrost tray; 4-lb. "Cheese Safe"; 4-lb. Butter Safe; three lift-out egg shelves; double-deck "Bottle Bar"; roll-out shelf; drop-down quarter-shelf.

Model DAG-95—9.5 cu. ft.; 42-lb. freezer locker; 14-lb. frozen storage drawer; Prestomatic defrosting; 4 door shelves. Model DG-8—7.6 cu. ft.; 28-lb. freezer locker; 10-lb. frozen storage drawer; 4 door shelves; Butter Safe. Model SG-7—7 cu. ft.; 28-lb. freezer locker; 10-lb. frozen storage drawer; 3 door shelves.

FREEZER DESIGN TO MATCH

Matching the Super Shelvador in exterior design and devised to be placed alongside it in the home is the new Crosley Shelvador upright freezer CG-13U which "catalogs its contents as the user fills it and makes all packages instantly visible as well as within fingertip reach," the company stated.

"The door alone holds over 100 packages of frozen food in exclusive tilt-down trays from which the user can select any package without disturbing any other, a gravity feed frozen juice dispenser, and a 'dinner basket' for storing odd-shaped packages."

The new upright Shelvador freezer also has basket-type roll-out interior trays, individually labeled for meats, fruits, etc., and a "Fast Freeze" compartment. Other features are an interior light and pastry rack.

FREEZER PLATES FORM SHELVES

Four refrigerated plates provide the prime freezing surfaces in the CG-13U (13 cu. ft.) and also the DG-11U (11 cu. ft.). One of the plates is mounted at the top of the main food compartment, and the other three form the shelves of the compartments below. The plates are of expanded metal design for high efficiency, Crosley said.

A 10-position cold control is mounted on the right-hand wall of the cabinet.

Features of the DG-11U include Fast Freeze compartment at top, two compartments below, and roll-out basket at the base, and, in the door, a juice rack, "Select-O-Tray," and two storage compartments.

The other upright freezer, model DG-19U (19 cu. ft.), has two full-width shelves, a roll-out basket, and a Fast Freeze compartment—refrigerated on four sides—at the bottom of the cabinet. In the door are three full-width shelves and a juice dispenser. A special feature of this model is a foot pedal door latch.

Crosley is also offering three chest-type models in 8.82, 14.5, and 20-cu. ft. capacities.

Crosley's new ranges have dial controls that offer the user "an 'infinite' number of heat speeds rather than merely five or seven." Top models measure cooking temperature and regulate the flow of current automatically to prevent burning of foods accidentally.

All models employ the new high speed "Micro Rod" or slim tube surface units that are claimed to heat faster than conventional-type units. A new bright grey stipple has replaced the traditional black in the oven interiors.

Refrigerators	Suggested List Price
RFG-125	$549.95
CAG-125	499.95
CAG-11	399.95
DAG-95	299.95
DG-8	229.95
SG-7	189.95
Ranges	
CTG-40	$449.95
CG-40	379.95
SDG-40	329.95
DG-40	269.95
MG-40	229.95
CG-30	239.95
EG-30	189.95
Freezers	
DG-19U	$599.95
CG-13U	449.95
DG-11U	369.95

ASHVE Proposed Name Change--

(Concluded from Page 1, Col. 3)

acquired in 60 years of service is retained."

The joint announcement continued:

"The name 'air conditioning' has been reserved for ASHVE by the secretary of state of New York since July, and just prior to the Oct. 8 council meeting the society was informed that this reservation would not be extended beyond the November expiration date to permit action on the proposed name change at Philadelphia in January as originally planned and announced to society members.

"Council then found itself confronted with the possibility of being unable to obtain the right to include 'Air Conditioning' in the name if action was delayed until January.

"It was therefore concluded to call a special meeting in November even though the job of accumulating a sufficient number of proxies in a short space of time might be difficult."

The society officials also pointed out to members that the name can be changed only by the affirmative vote of a majority of all members eligible to vote.

As a matter of information to members, the officials appended to their announcement a memorandum on reasons for and against the change in name.

Some of the reasons for the change, in brief, are:

The present name does not adequately describe the scope of present interests.

The society must protect its right to be identified with the air conditioning field and must be regarded as the most authoritative technical organization in this field.

If other societies adopt the "air conditioning" term in their names, ASHVE's identity with it may become less evident.

As time goes on, ASHVE's public relations program will probably be directed more and more to the public, who has a different understanding of the term "air conditioning" than professional engineers do. We want him to know who we are and what we are.

The term "air conditioning" has promotional possibilities.

Arguments against the name change are:

The society runs the risk of losing prestige or its identity with the name ASHVE, which it has had for 60 years.

Changing the name will not improve professional status.

The term "air conditioning" is a much maligned term and is misused frequently. We should be cautious about adopting the term as part of the society name.

A change now would set a precedent for future changes.

Here's Harry Alter's DEPENDABOOK No. 161 — 1954

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